Welcome

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the online VAIO® Computer User Guide. This user guide provides detailed information on all aspects of using your new VAIO computer, from keyboard functions to preinstalled software programs.
In the left navigation window, click the topics you want to learn more about, and that information will be displayed in this main window.

View the Electronic Flyer, which provides updates and supplemental information about your computer.

Powering Your Computer

Your VAIO® computer comes with a battery and an AC adapter. This chapter explains how to install and use these supplied accessories to power your computer. It also describes ways you can efficiently utilize the battery as a power source.

Using AC Power

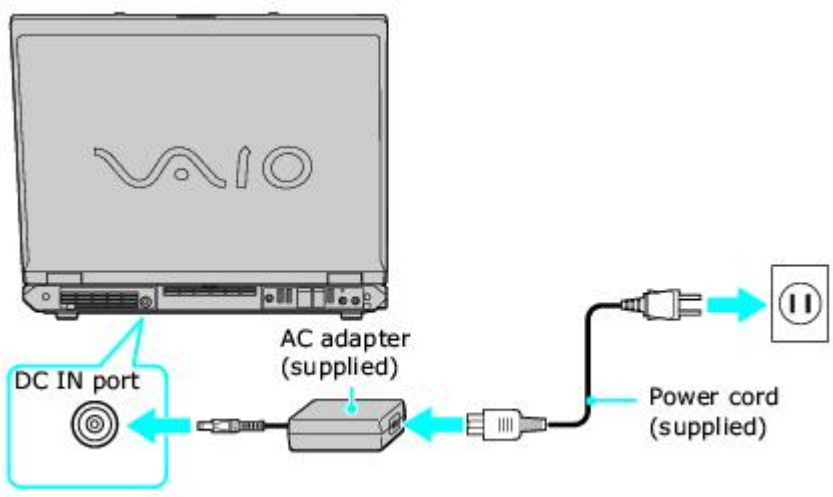
The supplied battery is not charged when you receive your computer. To charge the battery and begin using the computer immediately, insert the battery into the computer and use the supplied AC adapter as a power source. The computer automatically charges the installed battery while it uses AC power.

Connecting the AC adapter

To connect the AC adapter

1. Plug the AC adapter cable into the DC IN port.

Connecting the AC Adapter to the Computer



2. Plug the power cord into the AC adapter and an AC outlet.

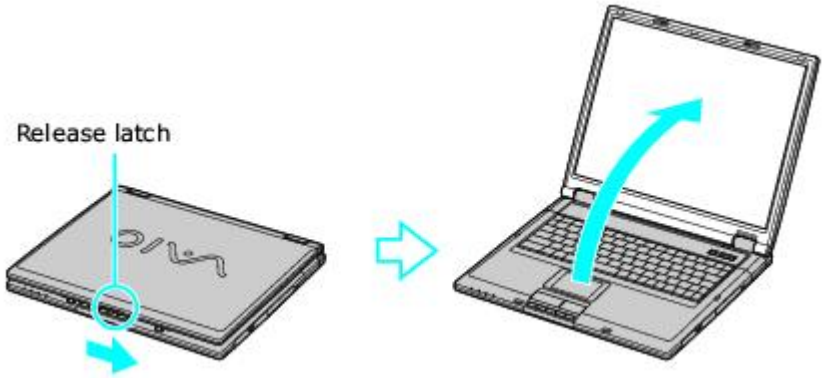
Use only the supplied AC adapter with your computer.

Turning on the computer

To open and turn on the computer

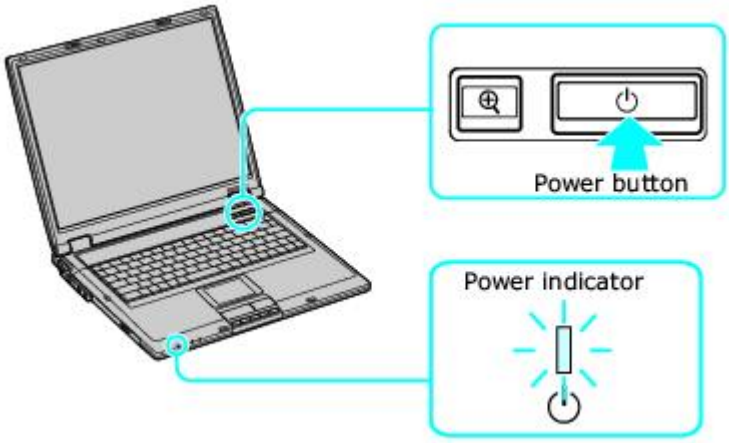
1. Slide the cover release latch and lift the cover while holding the bottom of the computer firmly.

Opening the Computer



2. Press the power button until the power indicator turns on.

Turning on the Computer



If you continue to press the power button, the computer turns off.

3. If the computer screen is too dark or too bright, follow these steps to adjust the brightness:

- To increase brightness, press the **Fn** and **F5** keys, and then press the **Up Arrow** ↑ or the **Right Arrow** → key.
- To decrease brightness, press the **Fn** and **F5** keys, and then press the **Down Arrow** ↓ or the **Left Arrow** ← key.

Using the Battery

Your computer, depending on the model you purchased, may come equipped with one battery bay and one multipurpose bay that supports a second battery. If your computer comes with two bays, you can purchase a second rechargeable battery to extend your computing time. For information on how to extend the life of the battery, see Conserving Battery Power for more information.

✍ When operating your computer on battery power, your computer's CPU speed is reduced.

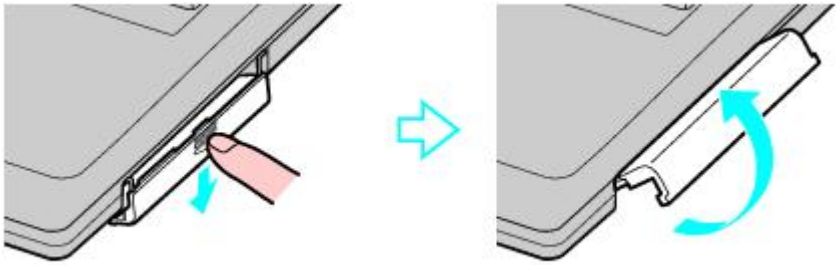
✍ The battery that comes with your computer is not fully charged at the time of purchase.

✍ The brightness of your computer screen automatically dims when you switch from AC power to battery power. To increase the brightness, press the **Fn** and **F5** keys, and then press the **Up Arrow** ↑ or **Right Arrow** → key.

To insert and charge the battery

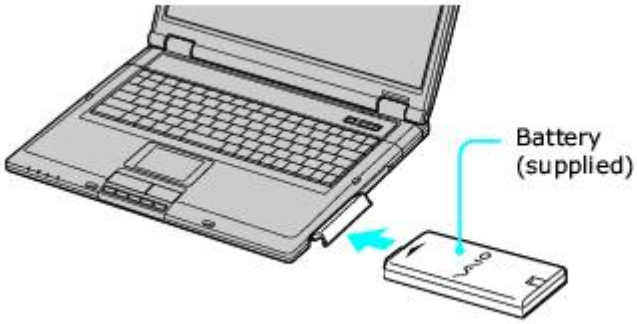
1. Open the computer lid.
2. Push the battery bay cover down to open it. The battery bay cover swings out but does not detach from the computer.

Opening the Battery Bay



3. Slide the battery (with the logo facing up) into the battery bay. If the computer is on, it automatically detects the battery.

Inserting the Battery



4. Push the battery bay cover up until it clicks into place.
5. Connect the AC adapter to the computer. See Connecting the AC adapter.

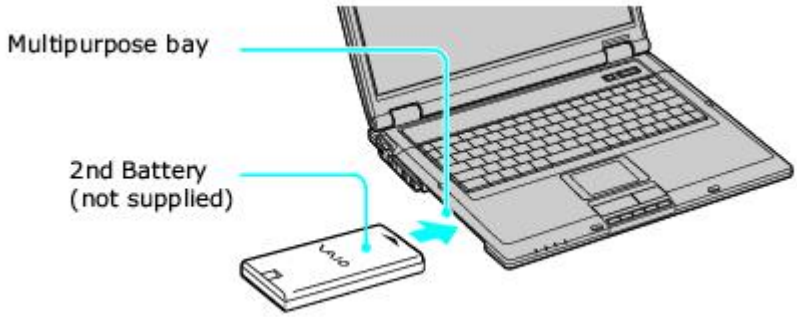
Once you connect the AC adapter to the computer, the battery begins to charge whether the computer is on or off. The battery indicator shows the battery status. The indicator blinks as the battery charges.

Using a second battery

To insert a second battery

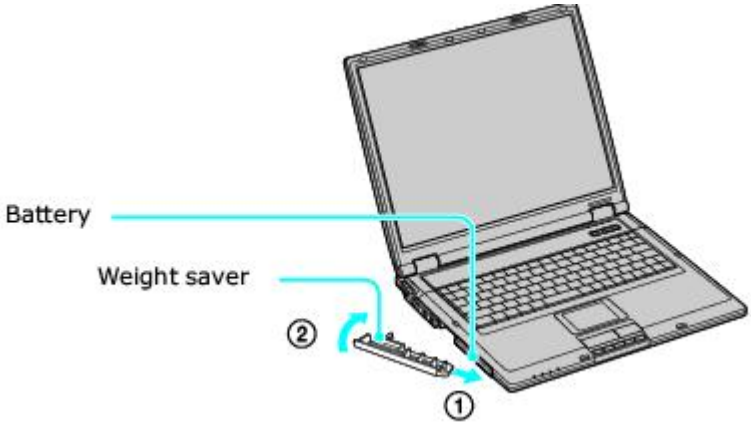
1. If another device is in the multipurpose bay, remove that device by performing the following steps:
    1. Locate the release switch on the bottom of the computer.
    2. While holding the release switch in the Release position, pull out the device from the multipurpose bay.
2. Insert the battery into the multipurpose bay. When the computer uses the second battery, the Battery 2 indicator turns on.

Inserting the Second Battery



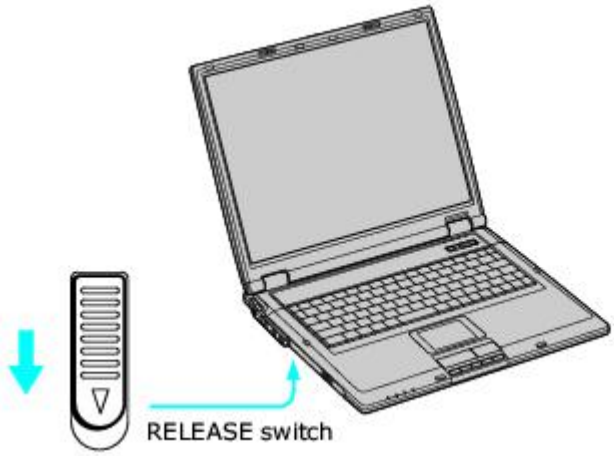
3. Slide the weight saver in the direction of the arrow until it clicks into place. The weight saver stabilizes the battery.

Inserting the Weight Saver



4. Lock the weight saver **RELEASE** switch.

Locking the Weight Saver



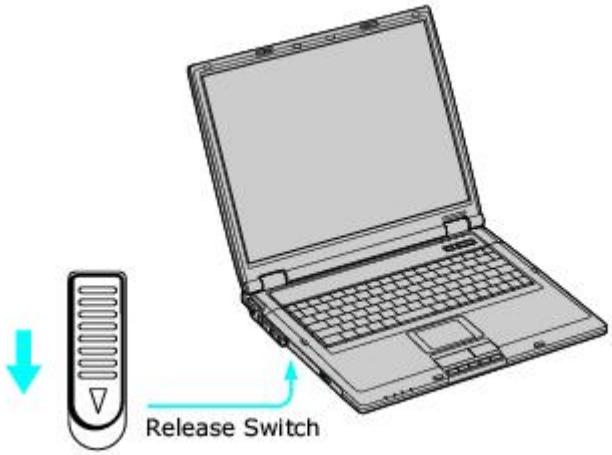
To remove the second battery

1. Make sure the Battery 2 indicator is off and the Battery 1 indicator is on or the computer is connected to AC power. If the Battery 2 indicator is on:

    1. Double-click the **CPU** icon or **Profile** icon, depending on the model you purchased. The **PowerPanel** dialog box appears.
    2. On the **Battery** tab, click **Primary Battery** in the **Battery Switch** box.
    3. Click **OK**.

2. Turn the computer over, and unlock the weight saver and the multipurpose bay using the release switch on the bottom of the computer.

Unlocking the Second Battery



3. Pull the weight saver and battery gently from the multipurpose bay.
4. Insert the weight saver into the multipurpose bay to protect the bay.

Conserving Battery Power

You may use the power saving modes and PowerPanel utility to conserve battery power. Conserving battery power may significantly extend your computing time, depending on how you use your computer.

Using power saving modes

In addition to the normal operating mode, which allows you to turn off specific devices to save power, your computer has two distinct power saving modes: Standby and Hibernate. Use the Standby and Hibernate power saving modes to override a power profile setting and initiate immediate action.

- **Standby** — Saves the state of the system and peripheral devices in memory (RAM). Power consumption is reduced to a minimum. The system remains on, and the computer screen (LCD) is off.
- **Hibernate** — Saves the state of the system and peripheral devices to the hard disk. Power consumption is reduced to the lowest possible setting without being completely off. Hibernate mode consumes the lowest level of power. Your computer enters Hibernate mode when the remaining battery charge drops below 5 percent, regardless of the setting you select.

✍ Since some programs and peripheral devices prevent the system from entering Hibernate mode, save your data frequently to avoid data loss.

To activate Standby mode

1. Press the **Fn** and **Esc** keys. The power indicator blinks in this mode.
2. Press any key to return to normal mode.

To activate Hibernate mode

1. Press the **Fn** and **F12** keys. Do not move the computer until the power indicator turns off.
2. Press the power button to return to normal mode.

✍ If your computer does not activate Hibernate mode, see Battery for more information.

Using PowerPanel utility

The PowerPanel utility enables you to select and customize a predefined power management profile to conserve battery life. The following table describes all the predefined power management profiles in PowerPanel. You can customize the settings for all the following profiles, except the Disable Power Management profile.

Profile

Icon **Description**

Maximum Performance
Provides the best system performance but conserves minimal power.

Maximum Battery Life
Provides power saving features to give you maximum battery life and good performance. It slows the computer and puts it into Standby mode after a specified time.

Ultimate Battery Life[1]
Extends the Maximum Battery Life by stopping power to the optical drive and Memory Stick® media slot.

Power Management Off
Disables all power management settings, such as Standby and Hibernate modes. You cannot change the settings of this profile.

AC Power
Indicates when AC power is in use. Similar to Power Management Off and the Standby mode after a half hour. Power Management automatically loads the AC profile unless you disable this feature.

Games
Disables the display and the Hard Disk Standby timer.

Presentation
Keeps the display on at all times while conserving power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Camera
Optimizes performance and power requirements for camera usage.

DVD
Optimizes performance and power requirements for DVD usage.

Word Processing
Optimizes power management with longer time-outs on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Spreadsheet
Optimizes performance and power requirements for spreadsheet programs.

Communications
Extends battery life by initiating a quick display time-out. The Internal modem remains powered on. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Automatic Profile Selection
Automatically selects a profile suitable for active software programs.

[1] Do not choose the Automatic Profile Selection when connected to AC power.

To select a profile

1. Right-click the **CPU** icon or **Profile** icon, depending on the model you purchased. See Locating battery information for Battery icon descriptions.
2. Select **Profiles**, and click the profile on the shortcut menu. The profile settings are implemented instantly. See Using PowerPanel utility for descriptions of available profiles.

When you use the battery to power your computer, your system automatically selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery to power your computer.

See PowerPanel Help for information on customizing the power management profiles.

To customize your profile settings

You can customize your profile settings to sustain enough power for a particular computing function.

1. Right-click the **CPU** icon or **Profile** icon, depending on the model you purchased.
2. Select **Edit/Create Profiles** from the shortcut menu.
3. In the left panel, select the profile you want to change.
4. In the right panel, right-click the setting under **System**, **LCD(Video)**, **Hard Disk**, or **Other Devices** that you want to change. See the following table for a description of each power management setting.
5. Make your changes from the drop-down menu.
6. Click **File**, and click **Save**.

Power Management Setting Description

CPU Control[1] Controls the processor speed. You can select either **Performance**, **Adaptive**, or **Battery Life**. These selections are listed in order from the greatest to least amount of power consumed.

System

Standby Timer Controls the time it takes the system to activate the Standby mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer consumes.

Hibernate Timer Controls the time it takes the system to activate the Hibernate mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer consumes. Hibernate mode conserves more power than Standby mode.

Thermal Control Strategy[1] (On selected models) Controls the speed of the processor fan. You can set the fan speed to different levels. **Level 1 (Quiet)** conserves the most power.

Lid Close Action Controls the state of your system when the lid of the computer is closed. You can select either **Standby**, **Hibernate**, or **LCD Off**.

Hibernate on Low Battery Controls the state of your system when the battery power is low. You can turn this setting **On** or **Off**. Selecting On conserves the most power when the battery is low.

LCD

Brightness Controls the brightness of the computer screen (LCD). You can select a brightness level of one to nine. The darker you set the computer screen the more power you conserve.

LCD Standby Timer Controls the time it takes the system to turn off power to the computer screen (LCD) when the system is idle. The system itself still functions on full power.

HDD Standby Timer Controls the time it takes the system to turn off power to the hard disk drive when the system is idle. This setting only turns off power to the hard disk drive.

i.LINK Port Controls power to the i.LINK® port. Disabling power to the i.LINK port conserves power.

Memory Stick Port Power-saving Controls power to the Memory Stick media slot. Disabling power to the Memory Stick media slot conserves power.

Optical Drive Power-Saving Controls power to the optical drive. Disabling power to the optical drive conserves power.

[1] Slows the processor speed.

Locating battery information

You can view the remaining battery charge and miscellaneous battery information on the Battery Information toolbar, the PowerProfile window, and the Power Meter window.

The Battery icons that appear on the **Battery Information** toolbar and PowerPanel window indicate the current status of the installed battery.

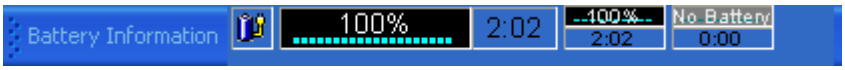
Battery icon	Charge status
	Charging
	Fully charged
	Discharging
	No battery

To view the Battery Information toolbar

1. Right-click the center of the Windows® taskbar.
2. Select **Toolbars** from the shortcut menu, and click **Battery Information**. The **Battery Information** toolbar appears on the taskbar.

The total charge remaining in the battery is listed in percent and real-time values.

Battery Information Toolbar*



* The Battery Information Toolbar may appear slightly different on your computer, depending on the number of batteries your computer supports.

- **Percentage indicator —** Displays the percentage of the remaining charge.
- **Time indicator —** Displays estimated time (hours : minutes) remaining before the battery fully discharges, also known as the time-to-empty.

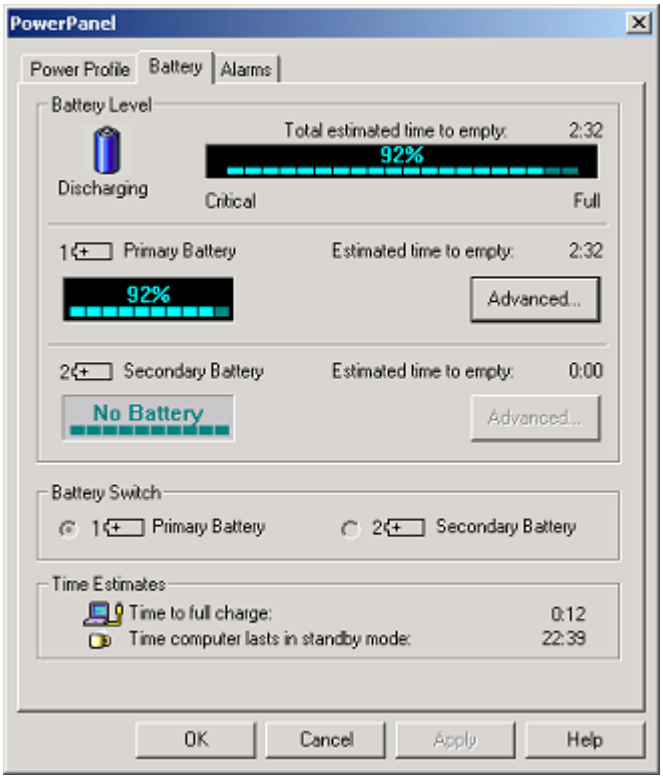
To close the Battery Information toolbar

1. Right-click the **Battery Information** toolbar.
2. Select **Toolbars** from the shortcut menu, and click to cancel **Battery Information**. The **Battery Information** toolbar disappears from the taskbar.

To view the PowerPanel window

Double-click the **CPU** icon or **Profile** icon , depending on the model you purchased. The **PowerPanel** window appears.

PowerPanel*



* The PowerPanel window may appear slightly different on your computer, depending on the number of batteries your computer supports.

- **Power Profile—** Displays the power management settings for various devices on your system. You can change the settings to conserve power.
- **Battery tab —** Displays the total charge remaining in the battery. You can click **Advanced** for specific information on the battery.
- **Alarms tab —** Displays the alarm settings, which notify you when the battery is fully charged or too low. You can change your computer's alarm settings on this window.

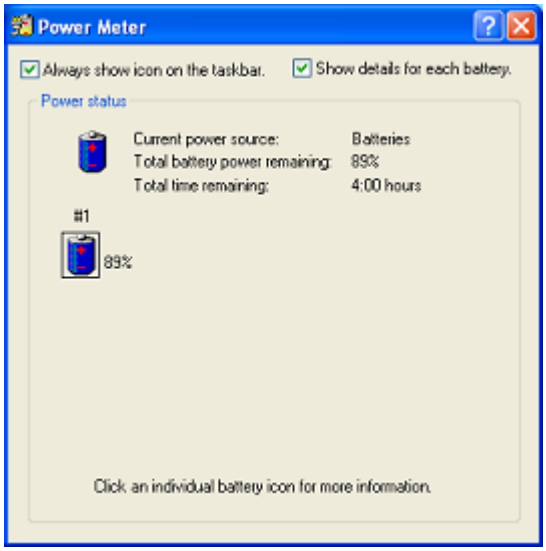
Click **Help** in the lower right corner of the window for more information.

To view the Power Meter window

1. Double-click the **Power** icon. The **Power Meter** window appears. You can also rollover the Power icon to view the remaining battery charge.

Power icon	Power status
	Computer is using AC power.
	Computer is using AC power and charging the battery.
	Battery is charging.
	Battery is fully charged.
	Battery is discharging.
	No battery is inserted in the computer.

If the Power icon is not displayed on the Taskbar Notification area, see To display the Power icon on the taskbar.



To display the Power icon on the taskbar

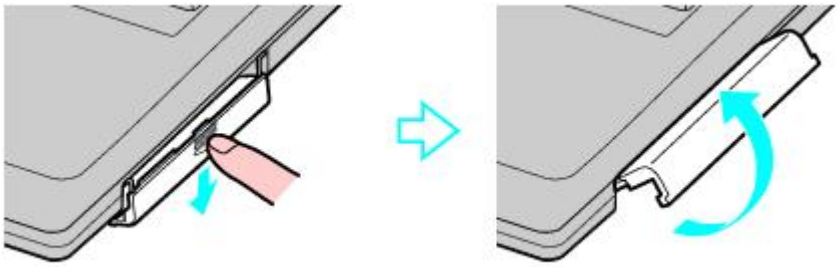
1. Click **Start** on the Windows® taskbar, point to Settings, and click **Control Panel**.
2. Click **Power Options**. The **Power Options Properties** window appears.
3. Select the **Advanced** tab, and then select **Always show icon on the taskbar** in the **Options** box. The power icon appears on the taskbar. See the power icon descriptions above for more information.

Inserting a battery

To insert a battery

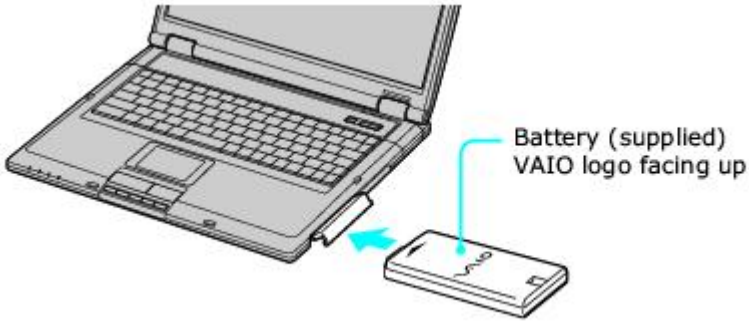
1. Lift the lid of the computer.
2. Push the battery bay cover down to open it. The battery bay cover swings out but does not detach from the computer.

Opening the Battery Bay



3. Slide the battery into the battery bay. If the computer is on, it automatically detects the battery.

Inserting a Battery



4. Push the battery bay cover up until it clicks into place.

If a port replicator is attached to your computer, do not insert or remove the battery. Lifting and turning the computer with a port replicator attached could cause a temporary loss of power.

Some programs and peripheral devices prevent the system from automatically entering Hibernate. If you are using battery power, save your data frequently to avoid data loss and manually activate a power saving mode. See Using power saving modes for more information.

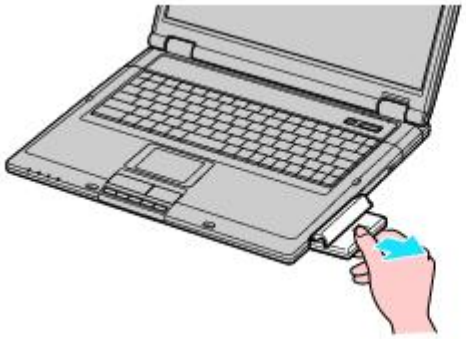
Removing a battery

If you are not using the computer for an extended period of time, remove the battery from the computer to avoid damaging the battery. Remove the battery when the computer is off.

To remove a battery

1. Make sure the computer is off.
2. Push the battery bay cover down to open it.
3. Pull the battery out of the battery bay.

Removing a Battery



4. Push in and lift up the battery bay cover until it clicks into place.

Charging a battery

You will need to charge the battery if battery power drops below 10 percent or you have not used the battery for a long time. The lithium-ion battery supplied with your computer may be recharged at any time, whether you wait until the battery is completely or partially discharged. Charging a partially discharged battery does not affect battery life. If you charge the battery and find that battery power is still low, the battery may be reaching the end of its life, and you may need to replace it.

The battery supplied with your computer is not charged at the time of purchase.

To charge a battery

You can charge the battery when the computer is on or off. However, the battery will charge faster when the computer is off. Charging the battery takes several hours. See your VAIO® Computer Specifications for the approximate time needed to charge your battery.

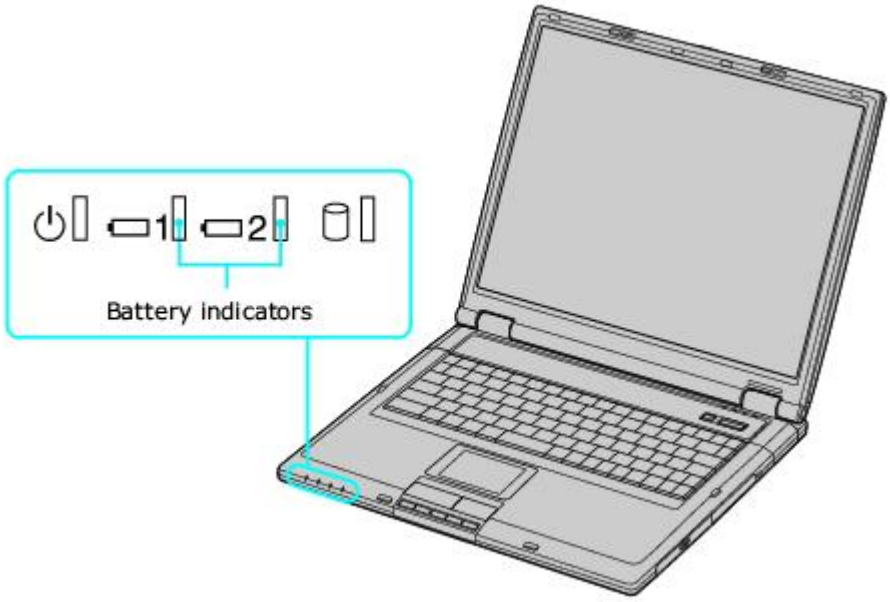
Charge the battery at temperatures between 50°F and 80°F (10°C to 30°C). Lower temperatures require more time to charge.

1. Insert the battery into the battery bay. If you want to charge more than one battery, insert the second battery into the computer. See To insert a second battery for more information.
2. Connect the AC adapter to the computer. The computer automatically charges the battery as long as the computer is using AC power.

The battery indicator blinks while the battery charges. The battery indicator stops blinking when the battery is fully charged.

When using two batteries, the battery you insert first charges first. The second battery you insert begins charging when the first battery is 85 percent charged.

Battery Indicators



Battery indicator status	Description
On	The computer is using battery power.
Single blink	The battery is running out of power.
Double blink	The battery is charging.
Off	The computer is using AC power.

Notes on batteries

- Never leave the battery in temperatures above 140°F (60°C), such as under direct sunlight or in a car parked in the sun.
- While the battery is in use or being discharged, the battery heats up. This is normal and is not cause for concern.
- Keep the battery away from heat sources.
- Keep the battery dry.
- Do not open or disassemble the battery.
- Do not expose the battery to any mechanical shock.
- Battery life is shorter in a cold environment because of decreased battery efficiency at low temperatures.

Using Special Buttons

Depending on the model you purchased, your VAIO® computer is equipped with a variety of audio- and video-oriented function buttons: Volume Up and Down, and Magnify screen.

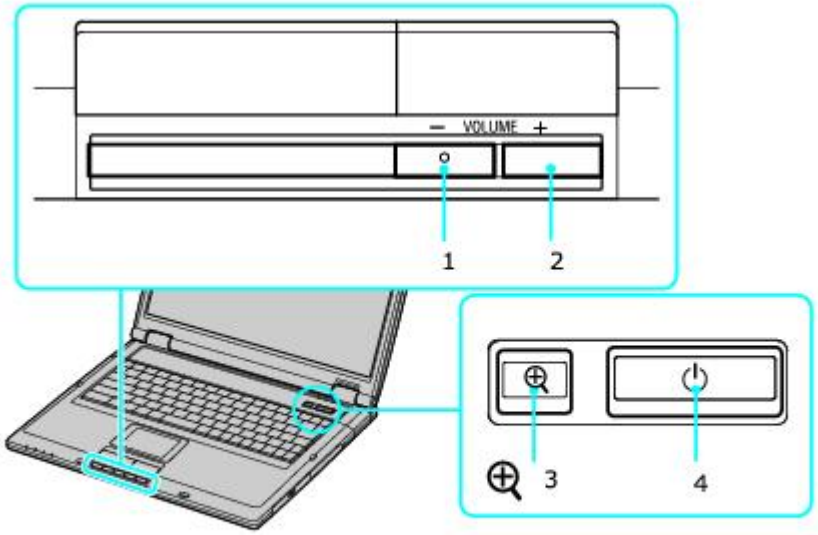
Using Special Buttons

Depending on the model you purchased, your VAIO® computer is equipped with a variety of audio- and video-oriented function buttons: Volume Up and Down, and Magnify screen.

About the special buttons

The following information shows where the special buttons are located, and briefly describes their functionality.

Special Buttons



Number Type of Button

1 Volume Down. The Volume Up and Down buttons control the audio output on your computer.

2 Volume Up. The Volume Up and Down buttons control the audio output on your computer.

3 Magnify. The Magnify button, located next to the computer's power button, works as a screen resolution toggle button. By pressing it, you can alternate between different screen resolutions.

4 Power. The Power button turns your computer on or off.

Using i.LINK Digital Video Recorders

You can connect a digital video (DV) recorder, such as an i.LINK®[1] digital video camera recorder, to the i.LINK® S400 (IEEE 1394) port on your computer. The i.LINK digital-video camera recorder is an external device that enables you to record and view digital images.

[1] i.LINK is a trademark of Sony used to designate that a product contains an IEEE 1394 connector. The i.LINK connection may vary, depending on the software application, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for more information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting an i.LINK digital video recorder

You can connect an i.LINK digital video (DV) recorder when the computer is on or off. Connecting the DV recorder when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

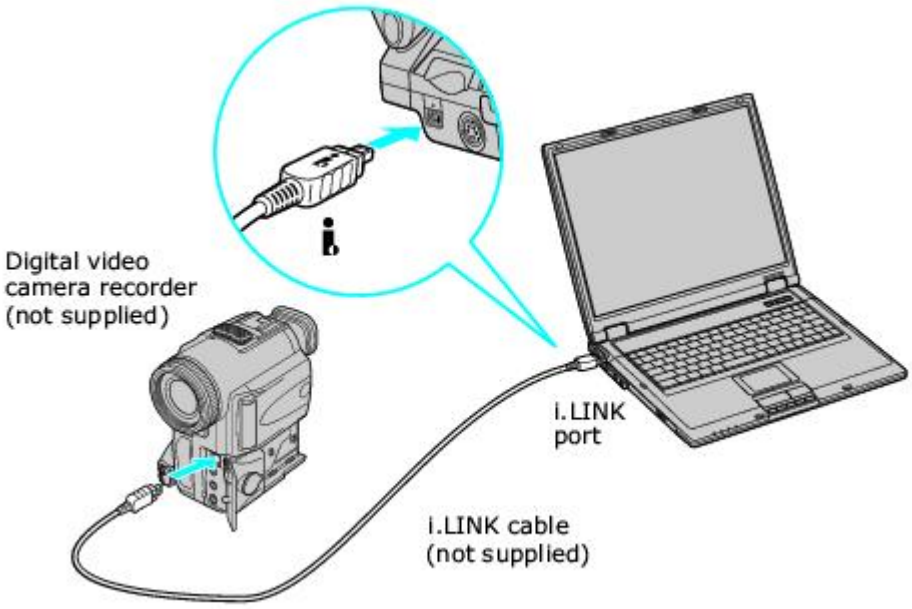
Before you connect an i.LINK digital video recorder

- Do not connect more than one digital video camera recorder at a time. The preinstalled programs on your computer will not recognize multiple cameras.
- Do not connect an external device that requires power from the i.LINK port. The i.LINK port does not supply power to the external device.
- The i.LINK port supports transfer rates of up to 400 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.
- The i.LINK features available may vary depending on the programs you use. See the help guide that accompanied your program for more information.

To connect an i.LINK digital video recorder

1. Turn on the digital video (DV) device and the computer.
2. Plug the i.LINK® cable into the i.LINK port on the DV device.
3. Plug the other end of the i.LINK cable into the i.LINK port on your computer.

Connecting an i.LINK Digital Video Camera Recorder



See the guide that accompanied your digital video camera recorder for more information on its installation and use.

Disconnecting the i.LINK digital video recorder

You can disconnect the digital video recorder while the computer is on or off. Simply unplug the i.LINK cable from the i.LINK port on the computer. Disconnecting the cable when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Using a digital video camera recorder

Your computer comes with preinstalled driver software that is compatible with most Sony digital video camera recorders. If you purchased a camera that comes with its own driver software, install these drivers before you use the camera.

To view images

To view images captured by your digital video camera recorder, do the following:

- Click **Start**, and click **Programs**. Select a program in which to view your images.

Using Computer Monitors, Projectors, and TVs

You can connect an external display (such as a computer monitor or a projector) to your computer.

Connecting a computer monitor

Your computer can display images to the computer screen (LCD), to an external computer monitor, or to both the LCD and external monitor while your computer is on.

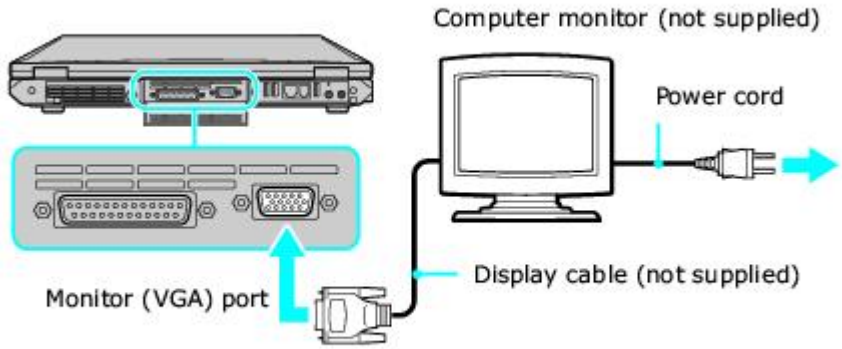
To connect a computer monitor

1. Make sure the computer monitor is plugged into an AC outlet.
2. Plug the display cable into the Monitor (VGA) port on the computer.
3. If it is not already on, turn on the computer monitor.
4. Press the **Fn**+**F7** keys to toggle the display between your computer, the monitor, or both the computer and monitor.

You cannot use the Monitor (VGA) port on your computer when a port replicator is connected to the computer. Use the Monitor (VGA) port on the port replicator instead.

Connecting a multimedia device

Connecting a Computer Monitor



You can connect a multimedia device, such as a multimedia computer monitor or projector, to your computer. Connecting a multimedia device enables you to display images on your computer screen (LCD), the multimedia device, or both.

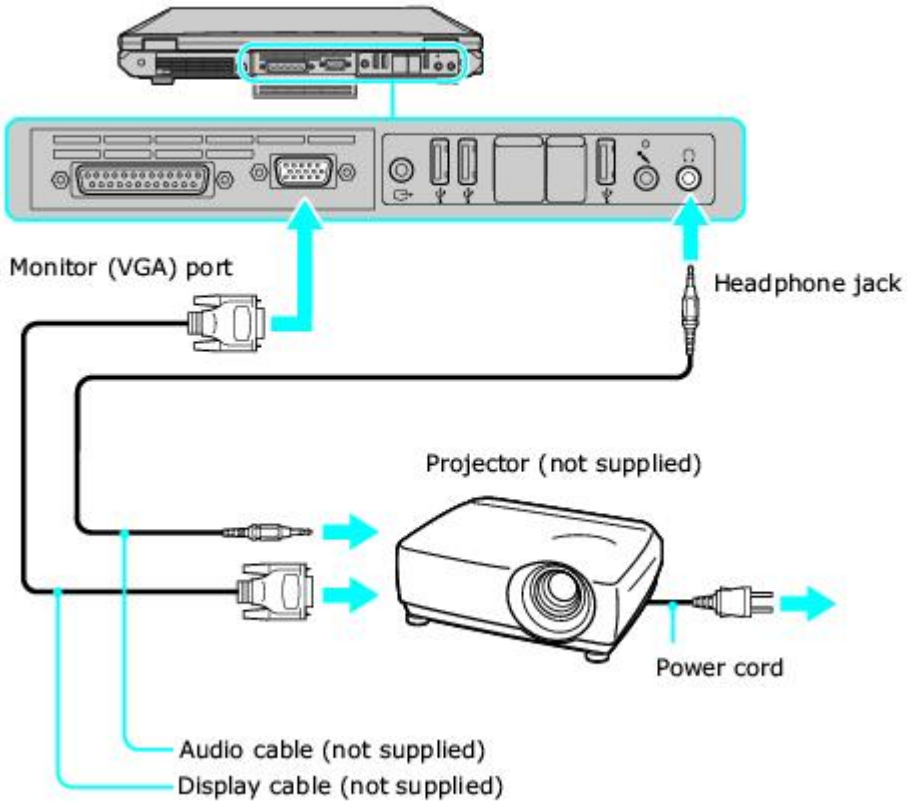
For information on connecting a TV to your computer, see Playing DVDs.

To connect a multimedia computer monitor or projector

1. Plug the device into an AC outlet.
2. Plug the device cable into the Monitor (VGA) port on your computer. If you are using a multimedia computer monitor, which has built-in speakers and a microphone, plug the audio cable into the Headphone jack on your computer to hear sound.

   To locate the Monitor port and Headphone jack, see "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.
3. Turn on the device (if it is not already on), and then turn on your computer.

Connecting a Projector



4. Press the **Fn**+**F7** key combination to toggle the display between your computer, the monitor, or both. See Selecting a display for more information.

✍ See the guide that accompanied your projector for more information on its installation and use.

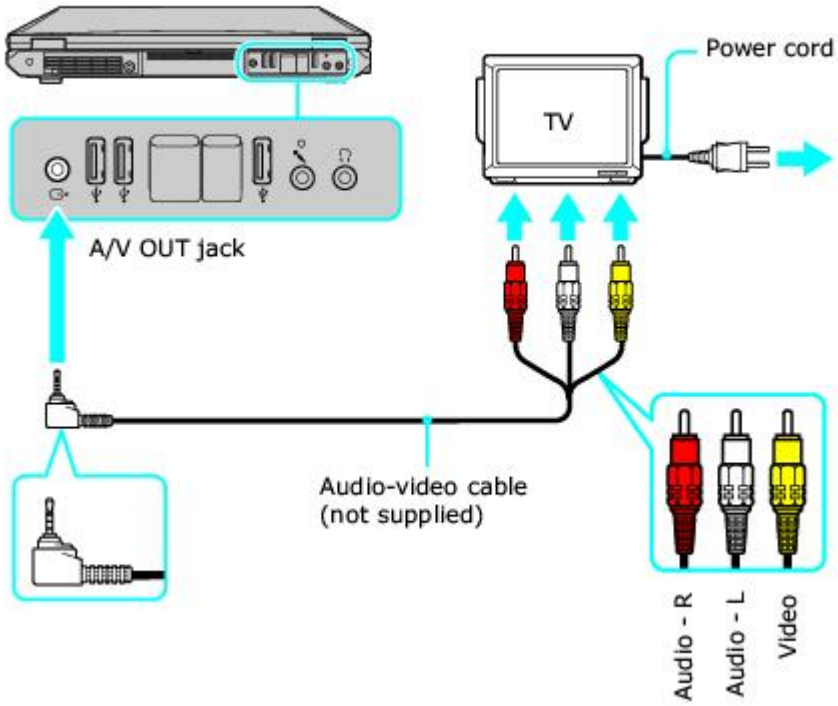
Connecting your computer to a TV

Your computer is equipped with an A/V OUT jack, which enables you to connect your computer to a TV. To locate the A/V OUT jack on your computer, see the Connecting a TV illustration below or "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.

To connect a TV to your computer

1. Locate the A/V OUT jack on the computer.
2. Plug one end of an audio-video (AV) cable (not supplied) into the A/V OUT jack.
3. Plug the other end of the AV cable into the audio and video ports on the TV.

Connecting a TV



4. Switch the TV input channel to external input.

See the guide that accompanied your TV for information on how to switch to external input.

Selecting a display

You can connect external displays to your computer while it is on. When you connect an external display (projector, computer monitor, or TV) to your computer, you can switch the display between the computer screen (LCD), the external display, or both, using shortcut keys.

Shortcut keys	Result
Fn+F7	Toggles the display between the computer screen (LCD), a connected TV, and both the LCD and TV.

Select one display (LCD or TV) when playing a DVD. Connect the TV cable before you turn on the computer; otherwise, **Fn+F7** will not work. You cannot use the **Fn+F7** function to switch between LCD and TV once a DVD is inserted into the optical drive.

✍ You may not be able to display the computer screen (LCD) and an external display or projector at the same time, depending on the types of computer displays and projectors you are using.

Disconnecting a computer monitor or projector

You can disconnect the external computer monitor or projector by unplugging the monitor (VGA) cable from your computer's port. Disconnecting the external display when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Using Speakers

Your computer comes with built-in stereo speakers. If you wish to enhance the sound quality of your computer, you can purchase and connect external speakers. If you want to purchase speakers, make sure the speakers are designed for computer use. You can shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

Connecting speakers

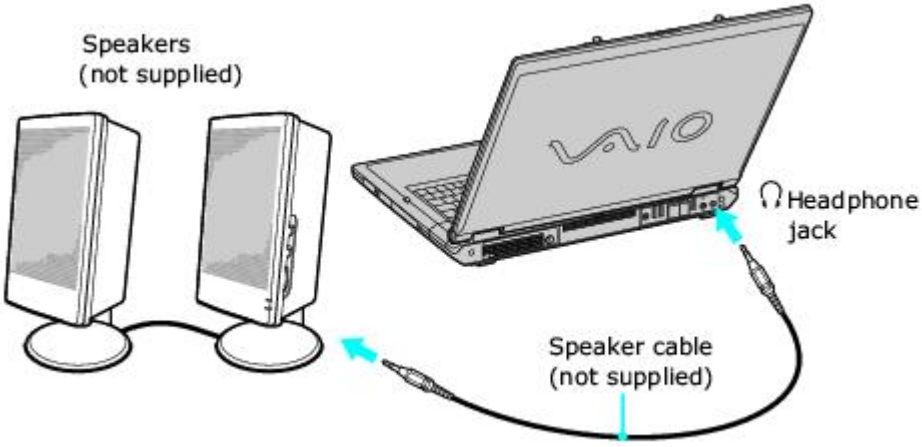
You can connect speakers to your computer to enhance the sound quality of your computer.

Do not place floppy disks on the speakers. The speakers' magnetic field may damage the data stored on the floppy disks.

To connect speakers to your computer

1. Turn down the volume of the speakers.
2. Plug the speaker cable into the Headphone jack on the computer.
3. Plug the other end of the speaker cable into the speaker.

Connecting Speakers



See the guide that accompanied your speakers for more information on its installation and use.

Disconnecting speakers

You can disconnect external speakers when the computer is on or off. Simply unplug the speaker cable from the Headphone jack on the computer.

Adjusting the volume

To adjust the volume for playing CDs and DVDs, use the **Volume** icon on the Windows® taskbar or the Volume Up and Down buttons. Adjusting the volume for playing CDs or DVDs does not adjust the volume for recording sound files.

You can only adjust the recording volume in the **Recording Control** window. See Using a microphone to record sound for instructions on how to open this window.

To adjust the volume of your speakers

1. Right-click the **Volume** icon on the Windows® taskbar, and select **Open Volume Controls**. The **Volume Control** window appears.
2. Click and drag the **Volume Control** slider up to increase volume and down to decrease volume.
3. Click to cancel any **Mute** check boxes that are selected.

Sound device	Function
Volume Control	Adjust the sound level from the speakers or headphones.
Wave	Adjust the wavfile sound or the system sound of Windows, and the volume of the CD in the optical drive.
SW Synth	Adjusts the internal or external synthesizer volume.
Microphone	Adjust the internal or external microphone volume.
Telephony	Adjust the modem or telephone volume.
PC Beep	Adjust the beep sound when inserting or removing the PC Card and other devices.
Line[1]	Adjusts the sensitivity of input volume.

[1] On selected models only.

As a shortcut, you can press the **Fn+F4** keys and the Up Arrow ↑ or Right Arrow → keys to change the volume setting. You can also press the **Fn+F3** keys to toggle the mute option on and off.

Enabling the audio feature

If you do not hear sound when playing a CD or DVD, you may need to enable the audio feature.

To enable the audio feature

1. Click **Start** on the Windows® taskbar, point to Settings, and click **Control Panel**.
2. Click **System**. The **System Properties** window appears.
3. Select the **Hardware** tab, and click **Device Manager**. The **Device Manager** window, which lists the hardware devices, appears.
4. Double-click the name of the optical drive, such as **DVD/CD-ROM drives**.
5. Double-click the listed drive name, and click the **Properties** tab.
6. Click the **Enable digital CD audio for this CD-ROM device** check box if it is not already selected.

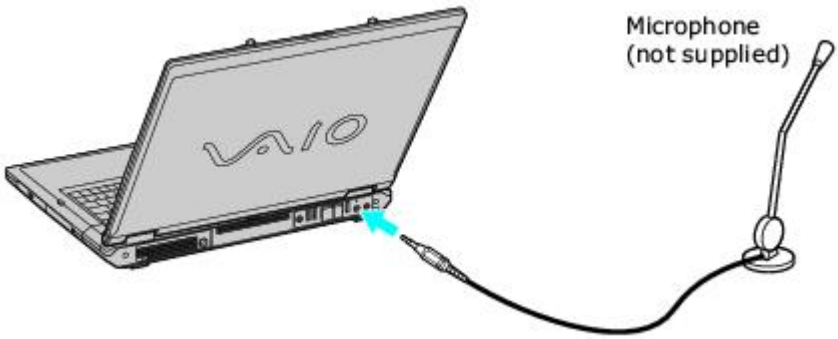
Using Microphones

You can connect an external microphone to your computer to enhance the sound input to your computer. Make sure your microphone is designed for computer use. If you wish to purchase a microphone, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

Connecting a microphone

Plug the microphone cable into the Microphone jack[1] on the computer.

Connecting a Microphone



[1] A protruding dot located next to the Microphone jack distinguishes this jack from the Headphone jack.

Disconnecting a microphone

You can disconnect an external microphone when the computer is on or off. Simply unplug the microphone cable from the Microphone jack on the computer.

Using a microphone to record sound

You can record messages, memos, etc. by connecting a microphone to the Microphone jack on your computer.

To record from a microphone

1. Double-click the **Volume** icon on the Windows® taskbar. The **Volume Control** window appears.
2. From the **Options** menu, click **Properties**. The **Properties** dialog box appears.
3. Click to select the **Recording** option in the **Adjust volume for** box, and click **OK**. The **Recording Control** window appears.
4. Click the **Select** check box at the bottom of the **Microphone** column, if it is not already selected. Close the **Recording Control** window.
5. Click **Start**, and select **Programs**, **Accessories**, **Entertainment**, and then **Sound Recorder**. The **Sound - Sound Recorder** window appears.

For help using Sound Recorder, click **Help** in the **Sound Recorder** window.

To adjust the volume for recording sound

You can only adjust the volume for recording in the **Recording Control** window.

1. Right-click the **Volume** icon on the taskbar, and select **Adjust Audio Properties**.
2. On the **Audio** tab, click **Volume** in the **Sound recording** box. The **Recording Control** window appears.
3. Click and drag the **Microphone** slider up to increase volume and down to decrease volume.

VAIO AV Applications

Your VAIO® computer is preconfigured with a collection of audio and video (AV) applications that make it easy to use advanced multimedia technology. This section describes the VAIO® AV applications.

✍ Your computer may not be supplied with all of the software applications listed, depending on the system configuration you purchased.

Your computer's visual presentation of the VAIO AV applications may not appear exactly as shown in this section, depending on the specific computer model you purchased.

Overview of Preinstalled Software

Some or all of the following software may be preinstalled on your VAIO® PC.

Drag'n Drop CD
DigiOn, Inc., and Easy Systems Japan Ltd.

Drag'n Drop CD software is designed to make CD creation simple. You can create your own audio or data CDs that can be read in most audio CD players or personal computers. With Drag'n Drop CD software, you can also back up CDs.

Drag'n Drop CD+DVD
DigiOn, Inc., and Easy Systems Japan Ltd.

Drag'n Drop CD+DVD software is designed to make CD and DVD creation simple. You can create you own audio or data CDs and data DVDs. These discs can be read in most audio CD players or personal computers. With Drag'n Drop CD+DVD software, you can also back up CDs.

DVgate
Sony Electronics Inc.

Connect a compatible digital video camera to your computer's i.LINK® port and capture video clips and still images. You can edit clips from your video, add new clips, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

MovieShaker
Sony Electronics Inc.

MovieShaker software creates personal movies that have transitions, background music, special effects, and text. Just import your video clips, and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

Network Smart Capture
Sony Electronics Inc.

Network Smart Capture captures images and video from any Sony Digital Camcorder that supports a standard i.LINK connection. Send your video or still images through e-mail or upload them to the ImageStation(SM) service. You can use the Web camera function to automatically upload your captured images.

PictureGear Studio
Sony Electronics Inc.

PictureGear Studio still image management software displays still images from your hard drive or a Sony digital still camera. The still images appear in a convenient light-table format so that you can easily view the contents of an entire folder, create your own photo albums and make prints.

SonicStage
Sony Electronics Inc.

The SonicStage jukebox application gives you all the tools you need to manage music on your computer. SonicStage software sports high-quality digital audio storage, a music visualizer, a sleek player skin design, and a parametric equalizer for fine-tuning audio playback.

Creating DVDs

The information provided here applies to VAIO® computers that are equipped with a DVD-RW or a DVD±RW drive. This drive, along with the preinstalled DVD and CD burning software make it easy to create DVDs and CDs. For a listing of DVD and CD burning software preinstalled on your computer, see your online specifications sheet.

The DVD-RW or DVD±RW drive and DVD creation software included with your VAIO® computer make it easy to create DVDs and CDs.

With these tools, you can create:

- Music CDs that can be played on computers with CD or DVD drives and on many home CD and DVD players.
- Data DVDs containing computer files that you can use on many computers with DVD drives.
- Data CDs containing computer files that you can use on computers with CD or DVD drives.

For more information about disc formats, recording media types, and compatibility with different playback equipment, see About DVD and CD Media, Formats, and Compatibility.

Your VAIO computer includes software programs for creating all of these types of discs. Different VAIO computer models include different combinations of disc-creation software.

Your VAIO computer model includes only selected software programs from the following list.

Data CD and DVD and Music CD Creation Software

- **Drag'n Drop CD+DVD** (on VAIO notebook DVD-RW and DVD±RW models)

  Drag'n Drop CD+DVD brings a unique drag-and-drop approach to the creation of data CDs and DVDs and music CDs. Three icons, Music, DISC Backup, and Data are available on the desktop. Just drag data files, music files, or a CD or DVD that you want to back up to the appropriate icon, insert a blank disc, and click the record button.

About DVD and CD Media, Formats, and Compatibility

Use the information in this section as a guide to which type of blank recording media and which kind of playback equipment you can use with different disc formats.

- Selecting DVD and CD media
- Using Compatible Playback Equipment
- Appending Data to a Data DVD

Selecting DVD and CD media

Use the correct recording media for successful recording projects. DVDs and CDs look similar, but different formats have different capabilities. To increase compatibility with other playback equipment, use high-quality writable media.

The table below indicates the appropriate media types for each kind of disc-recording project supported by your DVD-RW and DVD±RW drive.

Media and Drive	**Data DVD**				**Music and Data CD**	
	DVD-R for General	DVD-RW	DVD+R	DVD+RW	CD-R	CD-RW
DVD-RW Drive	Yes	Yes	No	No	Yes	Yes
DVD±RW Drive	Yes	Yes	Yes	Yes	Yes	Yes

Your DVD-RW and DVD±RW drives can use these types of writable media:

- **DVD-R for General**

  DVD Recordable media for General use is DVD media that you can write to, but which cannot be erased. With your DVD-RW and DVD±RW drives, you can write information to a DVD-R disc until the disc is full, but not erase or overwrite any existing data. DVD-R for General media is correct for data DVD projects. (Do not confuse DVD-R for General discs with DVD-R for Authoring discs, which are a special media made for commercial DVD production and equipment.)

- **DVD-RW**

  DVD Rewritable media is DVD media that you can write to, erase, and write to again. With your DVD-RW and DVD±RW drives and DVD-RW media, you can record information to the same disc again and again, although you must erase existing information from the disc before each recording session. DVD-RW media is correct for data DVD projects.

- **DVD+R**

  DVD+R Recordable media is DVD media that you can write to, but which cannot be erased. With your DVD±RW drive, you can write information to a DVD+R disc until the disc is full, but not erase or overwrite any existing data. (Certain software applications and disc formatting, may permit the addition of information to a DVD+R disc that already has data on it.) DVD+R media is correct for data DVD projects.

- **DVD+RW**

  DVD+RW Rewritable media is DVD media that you can write to, erase, and write to again. With DVD±RW media, you can record information to the same disc again and again. (Certain software applications and disc formatting, may permit the addition of information to a DVD+RW disc that already has data on it.) DVD+RW media is correct for data DVD projects.

- **CD-R**

  CD Recordable media is CD media that you can write to, but which cannot be erased. (Certain software applications and disc formatting, may permit the addition of information to a CD-R disc that already has data on it.) CD-R media is correct for music and data CD projects.

- **CD-RW**

  CD Rewritable media is CD media that you can write to, erase, and write to again. (Certain software applications and disc formatting, may permit the addition of information to a CD-RW disc that already has data on it.) CD-RW media is correct for music and data CD projects.

There are a variety of CD and DVD media types that you **cannot** write to with your DVD-RW or DVD±RW drive (although, depending upon how a particular disc was recorded, your DVD-RW or DVD±RW drive may be able to read some of these media types). Media types your DVD-RW or DVD±RW drive cannot write to include:

- CD-ROM
- DVD-R for Authoring
- DVD-RAM

- DVD-ROM

Even with the proper type of media, the quality of manufacture and compatibility with different equipment varies from manufacturer to manufacturer and even from disc to disc from the same manufacturer. If you are confident you are using the proper type of disc for your project and you are having trouble recording information or playing a disc, try a different disc or a different brand of disc.

Using Compatible Playback Equipment

The table below gives a general idea of the compatibility of disc formats with different playback equipment. Compatibility between a specific disc and a specific kind of playback equipment cannot be guaranteed. Some older computer CD drives cannot read data CD-R and CD-RW discs.

✍ Use this table as a general guide to formats and equipment that works together, but refer to the specifications of your equipment for detailed information. To be completely sure about a combination of media, disc format, and equipment, you must test that specific combination.

PLAYBACK EQUIPMENT	MEDIA AND FORMAT		
	Music CD	**Data DVD**	**Data CD**
Computer DVD drive	yes	varies[1]	yes
Computer CD drive	yes	no	yes
DVD player	varies	no	no
Audio CD player	varies[1]	no	no

[1] Some audio CD players (particularly older models) cannot read CD-R or CD-RW media. Refer to the specifications of your equipment for compatibility information.

Appending Data to a Data DVD

When creating a data DVD you can choose whether to keep the writing session open to make a disc appendable.

- Appendable Writing

  With this option more data may be added to a disc as long as there is space available. The recording session stays open until the disc is full. Although the space on the disc may be used efficiently, a disc written incrementally may not be compatible with all DVD drives.

- Non-appendable Writing

  With this option all the data is written at one time and the session is closed, even if there is more space available on the disc. No further data may be stored on the disc. Non-appendable discs are more compatible with different DVD drives.

The table below describes the writing method for different media types for appendable and non-appendable writing.

	Writing Method	
Media Type	**Appendable**	**Non-appendable**
DVD-R	Not currently supported	Disc at once
DVD-RW	Not currently supported	Disc at once
DVD+R	Multi-session	Disc at once
DVD+RW	Single-session	Disc at once

The format will be UDF with Joliet in every case. UDF (Universal Disk Format) is a File System. Joliet is an extension of the ISO 9660 standard to allow CDs to be written using long filenames and Unicode on Windows.

Creating Data DVDs with Drag'n Drop CD+DVD

Drag'n Drop CD+DVD brings a unique drag-and-drop approach to the creation of data CDs and DVDs and music CDs. Three icons, Music, DISC Backup, and Data are the interface for Drag'n Drop software. Just drag data files, music files, or a CD or DVD that you want to back up to the appropriate icon, insert a blank disc, and click the record button.

Drag'n Drop CD+DVD desktop icons

The Using Drag'n Drop CD+DVD Software section describes the steps for starting the Drag'n Drop CD+DVD software, viewing the program's online Help.

This guide provides only general information about starting and using Drag'n Drop CD+DVD software. For detailed information about creating DVDs and CDs with Drag'n Drop CD+DVD software, consult the program's online Help.

Using Drag'n Drop CD+DVD Software

To start Drag'n Drop CD+DVD

1. Click **Start** in the Windows® taskbar, and click **All Programs**.
2. Point to **Drag'n Drop CD+DVD**, and click **Drag'n Drop CD+DVD**.

   Drag'n Drop CD+DVD starts, and the three Drag'n Drop CD+DVD icons (Music, DISC Backup, and Data) appear on your desktop.

To view the online Help for Drag'n Drop CD+DVD

The online Help for Drag'n Drop CD+DVD provides detailed information about using the program.

1. Click **Start** in the Windows® taskbar, and click **Programs**.
2. Point to **Drag'n Drop CD+DVD**, and click **Drag'n Drop CD+DVD Help**.

Working with Digital Video

The multimedia software preinstalled on your VAIO® computer makes it easy to import and edit videos from a compatible digital video (DV) or MICROMV [1] camera equipped with an i.LINK®[2] connector. After editing your creations, you can export them back to your video camera.

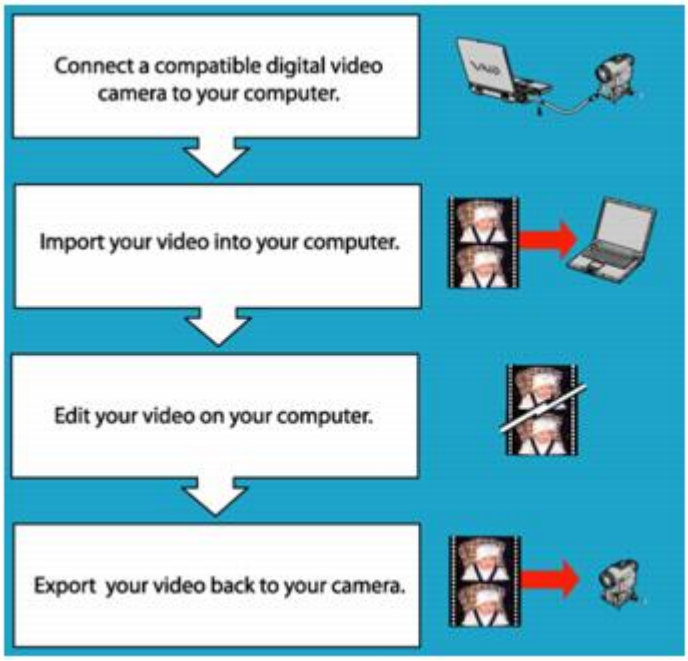
With **MovieShaker** software , you can arrange your video clips, still images, and sound files yourself into a finished movie, or let the Shake function use the files you've selected to create a polished video for you by automatically combining your video clips, still images, and sound with video effects and transitions.

DVgate software offers advanced and powerful video import and export features, as well as precise editing. DVgate software provides complete control over all aspects of capturing, editing, and exporting digital video.

Selected VAIO® computer models also include **Adobe® Premiere® LE** software , a popular video editing application that is both powerful and easy to use. For more information about this software, refer to the online Help for Adobe Premiere LE software.

Whichever software you choose, the basic process of importing, editing, and exporting is the same.

The Video Editing Process


Connect a compatible digital video camera to your computer.
Import your video into your computer.
Edit your video on your computer.
Export your video back to your camera.

1. Connect a compatible digital video (DV) or MICROMV camera to your computer using an i.LINK® cable.
2. Start the video editing software.
3. Use the video editing software to capture video clips from the DV camera.
4. Use the video editing software to assemble the clips into a finished movie.
5. Use the video editing software to export the finished movie back to the video camera.

You can also save finished movies to your hard disk drive for use on the World Wide Web, to send to others by e-mail, or to distribute on CD-ROM (on computer models that include a CD-recording device).

[1] MICROMV cameras are not supported on C1-series notebook models.

[2] i.LINK is a trademark of Sony used to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and i.LINK devices. All products with an i.LINK connection may not communicate with each other. Please refer to the documentation that came with your i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Editing Video with MovieShaker Software

MovieShaker software can be used to create fun and innovative movies without any previous knowledge of film editing. In a few simple steps, video files can be created from video clips and still images with added special effects and music.

This guide provides only a simple overview of using the MovieShaker software. For more detailed information, refer to the online Help within the MovieShaker software. For details regarding connecting your digital video camera to your computer, refer to the manual that accompanies your camera and the online User Guide that accompanies your computer

This guide provides only a simple overview of using the MovieShaker software. For more detailed information, refer to the online Help within the MovieShaker software. For details regarding connecting your digital video camera to your computer, refer to the manual that accompanies your camera and the online User Guide that accompanies your computer.

To capture digital video with MovieShaker software

The process for capturing digital video from a MICROMV camera differs from the process for DV described here.

For information about capturing video from a MICROMV camera, refer to the online Help within the MovieShaker software.

Video capture from MICROMV cameras with MovieShaker software is not supported on C1-series notebook models.

1. Plug an i.LINK® cable (not supplied) into the i.LINK port on your computer and the i.LINK port on a compatible digital video (DV) camera.
2. Turn on your compatible DV camera, insert a videotape, and set the camera to recording mode. On some camera models this is called VCR or VTR mode.
3. On your computer, click **Start**, click **Programs**, point to **MovieShaker**, and click **MovieShaker**.

   The MovieShaker software starts.
4. In the MovieShaker program, click the (Capture) tab.
5. In the MovieShaker program, click the **Play** button.

   Video from the videotape plays in the monitor window. If necessary, use the videocassette recorder-style buttons at the bottom of the Capture panel to rewind or fast-forward the videotape in your camera to reach the video clip you want to capture.
6. When the video reaches the point at which you want to start capturing video, click **Capture**.
7. When the video reaches the end of the clip you want to capture, click **Stop Capture**.

   When capturing is completed, a dialog box appears displaying the progress of importing the video clip.

   When importing is completed, the imported clip appears in the **Clip** tray at the left of the MovieShaker window.

Use the videocassette recorder-style buttons at the bottom of the **Capture** panel to rewind and fast-forward the videotape in your camera to reach each clip you want to capture. For each clip, repeat steps 5 through 7, above, to capture the clip and import it to the **Clip** tray.

To edit video clips with MovieShaker software

1. After capturing your video clips to the **Clip** tray, click the (edit) tab.
2. Drag your clips from the **Clip** tray to the **Story Board** panel at the bottom of the MovieShaker window in the order you want them to appear in the finished movie.

   The **Story Board** panel represents the time sequence of your movie. You can change the sequence of the clips on the **Story Board** panel by dragging them to your desired location.

   You can trim the beginning and end of any clip on the **Story Board** by clicking it and moving the orange triangles on the **Edit** panel to set the start and end point of the clip. Only the portion of the clip between the orange

triangles will appear in the final movie.

3. To add professional-looking transitions between clips on the **Story Board** panel, click **Transition** at the right of the MovieShaker window to open the **Transition** tray, and drag a transition from the list to the space between two clips on the **Story Board**.

4. To preview the entire movie, click the **Story Board** panel above the first clip so that a white triangle appears above the clip, and click the **Play** button on the **Edit** panel.

   The entire movie, including transitions, plays in the monitor window.

After you have arranged and trimmed your video clips and placed transitions between them, you are ready to export your finished movie back to your digital video camera.

You can learn about other MovieShaker editing features, including adding effects, narration, and text titles to your clips, in the online Help in MovieShaker software.

MovieShaker software's Shake feature can automatically combine your video clips into a finished movie with transitions, effects, and music. Refer to the online Help in MovieShaker software for details.

To export a finished movie to your digital video camera

After you have created a finished movie, you can export it back to your compatible digital video (DV) or MICROMV camera.

1. Make sure your camera is set to recording mode. On some camera models this is called VCR or VTR mode.

2. Turn on your DV or MICROMV camera, and insert a videotape.

3. In the MovieShaker program, click **Export** in the lower right corner of the **Story Board** tray.

4. Select **Export to external device**, and click **Next**.

5. A message appears alerting you that exporting video can take a long time. Click **Yes**.

6. The **Export to DV device** wizard appears. Follow the instructions in the wizard to complete the exporting process.

Editing Video with DVgate Software

DVgate software offers professional-level control over all aspects of capturing, trimming, and combining digital video clips from a compatible digital video (DV) camera. After you have combined your clips into a finished movie, you can export it back to your compatible digital video camera.

✍ The DVgate software does not support MICROMV video cameras.

This guide provides only a simple overview of using the DVgate software. For more detailed information, refer to the online Help within the DVgate software. For details regarding connecting your digital video camera to your computer, refer to the manual that accompanies your camera and the online User Guide that accompanies your computer.

To capture digital video with DVgate software

1. Plug an i.LINK® cable (not supplied) into the i.LINK port on your computer and the i.LINK port on a compatible digital video (DV) camera.
2. Turn on your compatible DV camera, insert a videotape, and set the camera to recording mode. On some camera models this is called VCR or VTR mode.
3. On your computer, click **Start**, click **Programs**, point to **DVgate**, and click **DVgate Motion**.

   The DVgate Motion software starts.
4. Select **IMPORT** - **Auto** from the **MODE** list in the **DVgate Motion** window, and click **SCAN**.

   The DVgate Motion software scans your tape and creates a list of video clips to be captured. The list appears in the **IN/OUT list** window.

   ✍ You can also manually specify video clips to be captured while viewing playback of your tape in the **Monitor** window. For details, refer to the online Help within DVgate Motion software.
5. If necessary, edit the list of video clips to be captured.

   To delete a clip from the list, click it, and click **DELETE**.

   Change the order in which clips will be captured by dragging them up and down the list.
6. To capture all the video clips on the **IN/OUT** list, click **CAPTURE ALL**.

   To capture an individual clip, click it in the **IN/OUT list** window and click **CAPTURE**.

   The **Save as a file** window appears. This window enables you specify a location on your hard disk drive where the video clips will be saved. In most cases, the default location of your D: drive partition is a good choice. You can also specify how DVgate Motion software will name your clip files.
7. Click **Save**.

   The **Batch capturing**... window appears, and DVgate Motion software captures your video clips to you hard disk drive.

To edit digital video with DVgate software

DVgate software enables you to combine your captured video clips into a single movie. You can also trim the beginning and end of each clip, so you only include the scenes you desire.

1. Click **Start**, click **Programs**, point to **DVgate**, and click **DVgate Assemble.**

   DVgate Assemble starts.
2. Click **ADD**.

   The **ADD** dialog box appears.
3. In the **ADD** dialog box, select the video clip files you want to include in your combined movie, and click **Open**.

You can select multiple clips by holding down the Ctrl key and clicking several files.

Your selected clips appear in the **Assemble** list in the **DVgate Assemble** window.

4. If necessary, edit the order of clips in the **Assemble** list.

   For the combined movie, clips are combined in the order they appear in the **Assemble** list, starting from the top.

   - To rearrange the order, drag clips up and down the list.
   - To remove a clip from the list, click it, and click **DELETE**.
   - To copy a clip, click it, click **Copy** on the **Edit** menu, click the location on the list where you want the copy to be placed, and click **Insert** on the **Edit** menu.

5. If necessary, trim your video clips to include only the scenes you want included in the final movie.

   - Double-click a clip.
     The clip opens in the **DVgate Assemble** - **Clip** window.
   - Drag the slider in the middle of the window to the point in the clip where your chosen scene begins.
   - Click **BEGIN**.
   - Drag the slider to the point in the clip where your chosen scene ends.
   - Click **END**.

     To view your trimmed clip, make sure the **BEGIN**-**END** check box is selected, and use the videocassette recorder-style buttons to play your clip. (If the **BEGIN**-**END** check box is not selected, the entire clip, rather than the trimmed clip, will play.)

     You can also set the begin and end points for your scene by playing the clip with the videocassette recorder-style buttons and clicking **BEGIN** and **END** when the clip reaches your chosen begin and end points.

   - Click **OK** to save your changes and close **DVgate Assemble** - **Clip** window.

6. When you have set the order of your clips and trimmed them to include only the scenes you want, you can preview the entire finished movie by clicking **PREVIEW ALL** in the main DVgate window.

7. Click **OUTPUT ALL** to save your finished movie to your hard disk drive.

   The **Save As** dialog box appears.

8. Select a location to which to save your movie, type a name for your movie, and click **Save**.

If you intend later to export your movie to your digital video camera, be sure to select **AVI file (*.avi)** in the **Save as type:** box before saving your movie.

To export a finished movie to your digital video camera

After you have created a finished movie, you can export it back to your compatible digital video (DV) camera.

1. Make sure your camera is set to recording mode. On some camera models this is called VCR or VTR mode.
2. Turn on your DV camera, and insert a videotape.
3. On your computer, click **Start**, click **Programs**, point to **DVgate**, and click **DVgate Motion**.

   The DVgate Motion software starts.

4. Select **EXPORT** - **Auto** from the **MODE** list in the **DVgate Motion** window.
5. In the **DVgate Motion - AVI file list** window, click **ADD**.

   If the **DVgate Motion - AVI file list** window is not open, click **List** on the **Window** menu.

The **ADD** dialog box appears.

6. In the **ADD** dialog box, select the movie file you want to export, and click **Open**.

   The **ADD** dialog box closes, and your selected movie appears in the **Record** list in the **DVgate Motion - AVI file list** window.

7. Click **RECORD ALL**.

   The **Output** dialog box appears.

8. Click **OK**.

   The **Output** dialog box closes, and recording to your DV camera begins.

✍ DVgate software is a powerful program for managing digital video that offers a wide range of features. This guide provides only an overview of the basic process of editing video with the DVgate software. For more detailed information, refer to the online Help within the DVgate software.

Working with Still Images

The Microsoft® Windows® 2000 operating system and the multimedia software preinstalled on your VAIO® computer make it easy to import, edit, and print your photographs and other images.

Importing Still Images

There are a variety of ways to bring still images into your computer. Which approach is right for you depends upon whether you have a digital camera or a traditional film camera.

- Many digital cameras connect directly to your computer.

  The Microsoft® Windows® 2000 operating system already contains all the necessary software to import pictures from many newer USB (Universal Serial Bus) digital cameras. Simply connect a USB cable between your camera and computer, and Windows XP operating system walks you through getting your pictures from the camera to your computer.

  PictureGear Studio software, preinstalled on your VAIO® computer, can help you import images from your digital camera and then manage, manipulate, and print them. For details about using PictureGear Studio, refer to the PictureGear Studio section of this guide under the VAIO AV Applications heading.

- Other digital cameras store pictures on floppy disks or Memory Stick® media that you can remove from the camera and insert into your computer.

  Once the floppy disk or Memory Stick media is inserted into your computer, you can copy your pictures to your hard disk drive just as you would copy any computer file.

- If your digital camera does not have a USB connection or is not directly supported by the Windows 2000 operating system, refer to the manual that accompanied your camera to learn how to connect your camera to your computer and transfer images.

- If you want to get traditional printed photographs into your computer, use a scanner.

  A scanner is a device that connects to your computer, "takes a picture" of your pictures, and stores them on your computer. The Windows 2000 system operating system already contains the software to work with many popular scanners. Simply connect your scanner to your computer, and Windows 2000 walks you through installing the scanner. To use scanners not directly supported by the Windows XP operating system, follow the instructions in the manual that accompanied your scanner.

- Many companies that develop traditional film photographs can, for an additional fee, provide a CD-ROM or floppy disk containing digital copies of your pictures. Consult your film developer for details.

Editing Still Images

After you have gotten your images into your computer, you can use image-editing software to enhance them. You can perform traditional darkroom tasks such as resizing, cropping, and altering colors. You can also add creative touches such as painting on top of your photographs, adding text, or combining multiple photographs into one.

Adobe® Photoshop® Elements software (or **Adobe® Photoshop® Elements Trial Version**[1], on some models) is powerful yet easy-to-use image-editing software that comes preinstalled on your computer. It includes a wide range of tools for enhancing your images and offers extensive online help so even novices can make the most of their pictures.

As well as enabling you to import and print your images, **PictureGear Studio** software, preinstalled on your VAIO® computer, enables you to create your own unique photo art by adding comments, custom backgrounds, clip art, and stamps to your digital images.

Another option for simple image-editing tasks is the Windows **Paint** program.

To start Adobe Photoshop Elements software

1. Click **Start** on the Windows® taskbar, and click **Programs**.
2. Point to **Adobe**, point to **Photoshop Elements**, and click **Adobe Photoshop Elements**.

To view the Adobe Photoshop Elements online Help

1. Start **Adobe Photoshop Elements**.
2. Click the **Help** menu, and click **Help Contents**...

To start PictureGear Studio software

1. Click **Start** on the Windows® taskbar, and click **Programs**.
2. Point to **PictureGear Studio**, and click **PictureGear Studio**.

To view the PictureGear Studio online Help

1. Start **PictureGear Studio**.
2. Click the **?** button on the PictureGear Studio start screen.

To view help from other PictureGear Studio screens, click the **Help** menu, and select **Help**.

To start Paint

- Click **Start** on the Windows taskbar, click **Programs**, point to **Accessories**, and click **Paint**.

[1] Adobe® Photoshop® Elements Trial Version offers a limited evaluation period, after which you can purchase the software for a special price.

Printing Still Images

Many of today's inexpensive computer printers can print images as sharp and bright as professionally developed film photos.

There are a variety of options for printing your digital images:

- You can print most images directly from the Microsoft® Windows® XP operating system by right-clicking the icon for the image and clicking **Print** from the shortcut menu. The **Photo Printing Wizard** appears and walks you through printing your image.
- If you are editing an image in **Adobe® Photoshop® Elements**, you can print your image by clicking **Print**... on the **File** menu.
- The **PictureGear Studio** software that is preinstalled on your computer offers a range of powerful printing options. You can create and print photo albums with interesting, customizable designs. You can design original postcards, calendars, art, and labels. For more information about using PictureGear Studio software, refer to the PictureGear Studio section of this guide and PictureGear software's online Help file.

To start PictureGear Studio software

1. Click **Start** on the Windows® taskbar, and click **Programs**.
2. Point to **PictureGear Studio**, and click **PictureGear Studio**.

To view the PictureGear Studio online Help

1. Start **PictureGear Studio**.
2. Click the **?** button on the PictureGear Studio start screen.

To view help from other PictureGear Studio screens, click the **Help** menu, and select **Help**.

The SonicStage software included with your computer is a powerful digital music management system that enables you work with digital music from audio CDs and from the Internet. You can play music on your computer, create custom audio CDs, and check music out to portable digital music devices, such as Net MD players and Network Walkman Digital Music Players.

SonicStage software employs Sony's OpenMG copyright protection technology and advanced ATRAC3 audio file format to allow you to enjoy digital music while protecting the rights of copyright holders.

You can enjoy digital music with SonicStage software in a wide variety of ways:

- **Play and record music from audio CDs**

  SonicStage software enables you to play your audio CDs and record audio tracks to your computer. Music tracks recorded to your computer can be combined into Playlists and checked out to portable music devices so you can take your music with you.

- **Create custom audio CDs**

  On computer models equipped with a CD recording device, you can create custom audio CDs from your SonicStage Playlists, mixing tracks from different sources and artist.

- **Make backup copies of your audio CDs**

  On computer models equipped with a CD recording device, SonicStage software's Backing Up Audio CDs utility makes it easy to create backup copies of your audio CDs.

- **Use Playlists to organize and manage your music**

  SonicStage software's powerful, hierarchical Playlist feature enables you to organize the music you've imported into the SonicStage program. You can create lists of songs categorized by artist or genre and place a shortcut to the list onto your desktop with Microsoft® Windows® operating system for one-click playback of your favorite music.

- **Download music from Electronic Music Distribution (EMD) services on the Internet**[1]

  Electronic Music Distribution services are Internet-based subscription services that allow you download music tracks from the World Wide Web. SonicStage software enables you to download music tracks, include them in your Playlists, and check them out to your portable digital music devices.

- **Import audio files from your computer**

  SonicStage software enables you to import MP3 and WAV audio files stored on your computer so they can be added to Playlists and recorded to CD (on computer models equipped with a CD recording device).

- **Enjoy karaoke-like effects during music playback**

  The Vocal Canceler effect can suppress the vocal track from most music during playback. This effect also enables you to shift the pitch of music to suit your vocal range. Used together, these features make it easy to sing along with your favorite music, turning your computer into a karaoke system.Vocal Canceler works only with stereo music clips.

- **Enjoy a Visualizer light show during music playback**

  The Visualizer feature of SonicStage software performs a colorful light show on your computer's screen to match your music as it plays.

To learn more about using the SonicStage software, refer to the online Help within the SonicStage program.

The Tutorial page within SonicStage software can help you get started. The Tutorial page lists common tasks and directs you to the part of the SonicStage software that performs the task you would like to do.

To start SonicStage software

1. Click **Start** on the Windows® taskbar, and click **Programs**.
2. Point to **SonicStage**, and click **SonicStage**.

To view the SonicStage software online Help

1. Start **SonicStage**.
2. On the **Help** menu, click **SonicStage Help**.

To make a backup copy of an audio CD

On computer models equipped with a CD recording device, you can use the **Backing Up Audio CDs** utility to make a backup copy of an audio CD.

On computer models that have both a read-only optical drive and an optical writing drive, you can make a copy with one click.

On computer models with only one optical drive, you must swap the original CD for a blank CD-R disc when requested to do so in the middle of the copying process.

1. Quit **SonicStage**, if it is running.
2. Click **Start**, click **Programs**, point to **SonicStage**, click SonicStage, and click **Backup tool**.

   The SonicStage Backup tool utility starts.
3. Insert the CD you want to make a backup of into your CD drive.

   Insert the CD into the optical drive you use to read CDs. Depending upon your computer model, this may be a CD-ROM drive, CD-RW drive, a DVD-ROM drive, a DVD-RW drive, or a Combo Drive.

   On computer models that have both a read-only optical drive (CD-ROM or DVD-ROM) and an optical writing drive (CD-RW or DVD-RW), put the CD into the read-only optical drive.
4. On computer models that have both a read-only optical drive (CD-ROM or DVD-ROM) and an optical writing drive (CD-RW or DVD-RW), insert a blank CD-R disc into the optical writing drive.
5. Make sure your CD drive is selected in the **Retrieve from:** drive list.
6. On computer models that have both a read-only optical drive (CD-ROM or DVD-ROM) and an optical writing drive (CD-RW or DVD-RW), make sure your optical writing drive is selected in the **Write to:** drive list.
7. Click **Start**.

   The audio data is read from your audio CD.

   On computer models that have both a read-only optical drive (CD-ROM or DVD-ROM) and an optical writing drive (CD-RW or DVD-RW), the data is immediately written to the blank CD-R disc. The **Copy Successful** message appears. **The backup copy is finished**.

   On computer models that have only a single optical drive (CD-RW, DVD-RW, or Combo Drive), the **Reading completed** message appears after the data is read from the original CD.
8. If a **Reading complete** message appears, remove the original source CD from the optical writing drive and insert a blank CD-R disc.
9. Click **OK**.

   The audio data is written to the blank CD-R disc.

   The **Copy Successful** message appears.

   The backup copy is complete.

[1] Use of an EMD service requires Internet access and separate subscription to the EMD service. The SonicStage software supports only EMD services compatible with OpenMG technology. Refer to the online Help within the SonicStage software for details.

DVgate Software

✍ For detailed information about using DVgate software, refer to the online Help within the DVgate software.

Connecting a digital video camcorder

Turn off the power to your digital video camcorder before connecting it to your computer. After connecting the device, turn its power back on. You do not need to turn off the computer when connecting the camcorder.

DVgate software does not support MICROMV digital video cameras.

To use DVgate software with a digital video camcorder

- Under the Microsoft® Windows® 2000 operating system, do not capture DV-AVI video files to the root directory (the top level) of your hard disk drive. Instead, create a folder and capture files to this folder.
- Do not use DVgate software when the connected digital video device is in Timer Recording mode, as this may produce a malfunction in the device.
- Video captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video, or you can add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. Perform a separate capture for each audio mode you wish to use.
- DVgate software does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate software.
- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate software.
- Disable your screen saver program to avoid interruption during your capture sessions.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- The information displayed by the capture progress indicator may not be accurate for tapes that are recorded using a mixture of both SP and LP modes.
- Keep the video head of your digital video device properly cleaned. Anomalies that you see in captured data may be due to dust or other particles on the video head.
- The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

To use DVgate software to record AVI files to tape

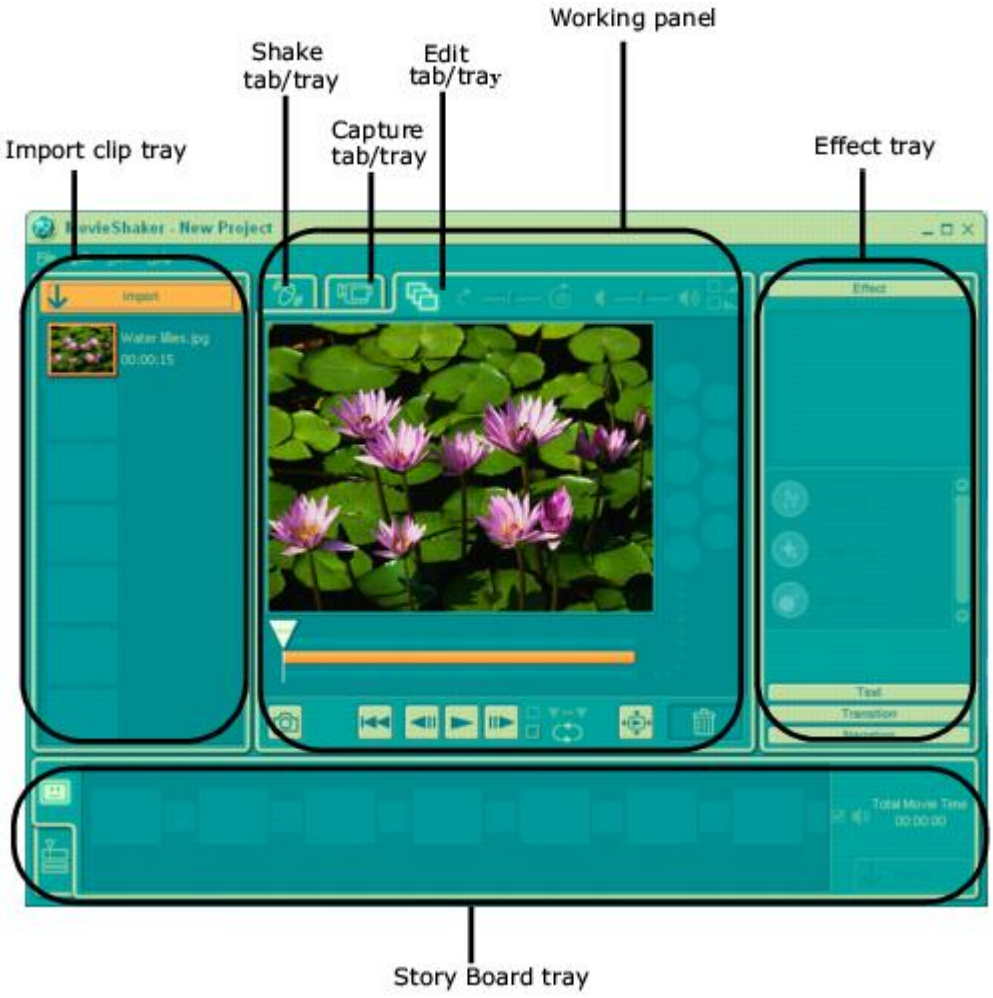
✍ You can record only AVI files. MPEG files cannot be recorded.

- Do not use DVgate software when the connected digital video device is in Timer Recording mode, as this could produce a malfunction in the device.
- Avoid recording problems, such as a single frame appearing in multiple frames, by closing other applications on your system while recording.
- You cannot use multiple audio modes on the same tape. If you have AVI files that use different audio modes, the files cannot be recorded at the same time, but must be recorded separately.
- The DVgate software does not support AVI files that are smaller than 4 MB.
- The DVgate software does not support hard disk compression.
- To maximize recording capabilities, video and audio data are not available while you are recording.
- If the DVgate software indicates that frames are dropped, try closing all open programs or defragmenting your hard drive.

MovieShaker Software

MovieShaker software can be used to create fun and innovative movies without any previous knowledge of film editing. In a few simple steps, you can turn a collection of video clips, still images, and audio files into a finished movie with special effects and music. You can save your personal video creation in a format that is compatible with most computers or save it to a tape in your compatible digital video (DV) or MICROMV [1] video camera.

MovieShaker software main window

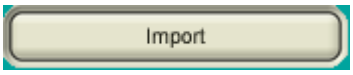


[1] MICROMV cameras are not supported on C1-series notebook models.

Creating movies with MovieShaker software

Using your imported clips, you can create a short movie using the Shake feature. The Shake feature selects clips from the Story Board tray, adds effects, and combines them randomly into a 30-second movie. After you "Shake" your video, you can edit it by adding effects and text, by adjusting the color and contrast, and by modifying its length.

Importing images and sound clips

1. Click 

. The Import file browser window appears.
2. Find the clips you want to add.
3. Click the clips. The files are added to the Import clip tray.
4. Repeat this process to gather each of the images and video and sound clips you want to use in your movie.

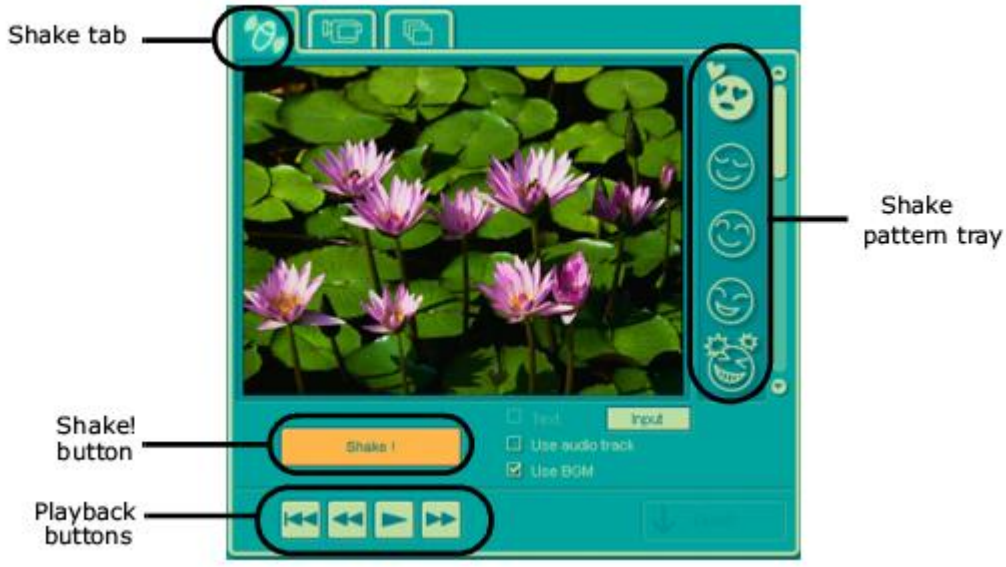
You can delete a clip from the Import clip tray by dragging the clip's icon to the trash icon located on the Edit tray of the working panel.

Importing image or sound files that are over 30 seconds in length may cause the MovieShaker software to stop responding.

Using the Shake feature

1. Click the **Shake** tab. The **Shake** tray appears
2. Select a mood by clicking a face in the **Shake** pattern tray.

Shake tray



3. Click the **Shake!** button. A 30-second movie is automatically generated.
4. **Optional:** Add text to your new movie by clicking on the **Text** button.
5. To preview, rewind, or fast forward your movie, use the **Playback** buttons.

Scenes created with the Shake feature begin with a black screen in the Shake tray window. Your scenes appear during movie playback.

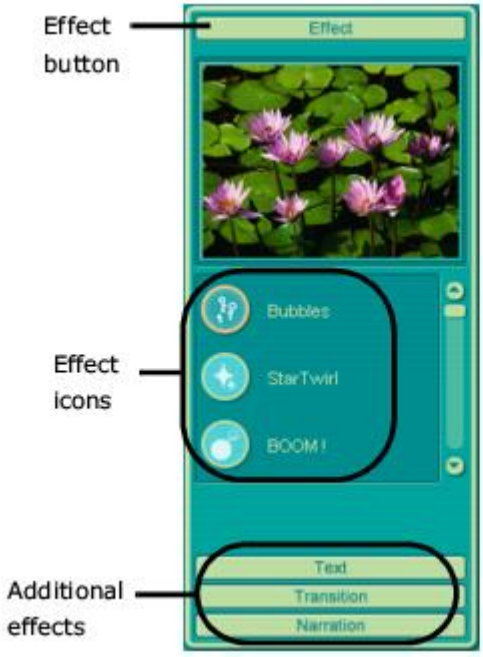
You can improve the image quality produced by the Shake feature (at the cost of longer Shake times) by turning off the "Shorten the Shake time" feature in the General panel of the Setting dialog box. See the Menu reference section of the online Help file for details.

Adding effects to a scene or a clip

1. Double-click or drag the desired clip or scene to move it to the Story Board tray.

2. Click the **Effect** button on the Effect tray.

Effect tray window (Effect button selected)



3. Drag the Effect icon you want to add from the Effect tray to the Effect palette on the Edit tray.

4. Click the **Play** button on the Edit tray to preview the effect. The added effect previews on the clip displayed in the Effect tray window.

A preview of the added effect is displayed in the Effect tray window. You can eliminate an effect by dragging it from the Effect palette to the trash icon on the Edit tray. See the online Help file for more information on adjusting effect duration and replaying clips and scenes.

Adding text effects to a scene or clip

1. Double-click or drag the clip or scene to move it to the Story Board tray.

2. Click **Text** on the Editing tray.

Effects Tray (Text button selected)

3. Click **Text Setting** to create customized text. The **Text Setting** dialog box appears. Enter your text, and select the font, size, style, color, and positioning for your text.

4. Drag the Text effect icon you want to add from the **Effects** tray to the **Effect** palette on the **Edit** tray.

5. Click the **Play** button on the **Edit** tray to preview the text effect. The clip displays the text effect in the **Effect** tray window.

✍ A preview of the added text and text effect is displayed in the **Effects** tray window. From the **Edit** tray, you can eliminate a text effect by dragging it from the **Effect** palette to the trash icon. See the online Help file for more information on adjusting Text effects.

Saving a movie

1. Verify that the movie or clips you want to save are located on the **Story Board** tray.
2. Click **Export** on the **Story Board** tray.
3. Select the format in which you want the movie to be saved.

✍ You can click on each export format to view its description and use.

Export window

Export
Export to file
Select the format of the file to be exported
MPEG1 (Attach to E-Mail) 160x112 10fps
MPEG1 (ImageStation) 160x112 10fps
QuickTime Movie 160x120 15fps
RealVideo 160x120 15fps
QuickTime Movie 320x240 30fps
MPEG1 320x240 30fps
DV-AVI 720x480 29.97fps
Select this to upload to ImageStation
Only the first 3 minutes of the movie will be exported
The login screen to ImageStation will appear after the file is created
Export to external device
Next
Cancel

4. Click **Next**.
5. Confirm that you want to continue.
6. Locate the folder to which you want to save the file, name your file, and click **Save**.

✍ The time required to export your movie file will vary with the format selected. See the online Help file for more information on exporting a movie.

Using the ImageStation online service with MovieShaker software

ImageStation℠ is an online service that allows you to store your pictures and movies on the Internet to share with family and friends. The ImageStation service requires an Internet connection and registration for the Web-based service. You must be connected to the Internet before uploading your pictures or movies using the MovieShaker software and ImageStation applications.

To upload MovieShaker files

1. Locate the clips or video files that you want to upload to the ImageStation℠ service, and import them to the **Import Clip** tray.
2. Drag the desired clips or video files to the **Story Board** tray.
3. Click the **Export** button. The **Export** window appears.
4. Select **MPEG1 (ImageStation)**, and click **Next**.

✍ The MovieShaker application creates a temporary file to store your images prior to uploading to the ImageStation service. This file is deleted after the upload process.

5. If you are a registered member, provide your login name and password.

   For first-time users, click **Register to ImageStation**. The ImageStation service registration wizard appears and guides you through the initial registration process. Follow the on-screen instructions.

ImageStation Login window

6. When the ImageStation application on your computer connects with ImageStation online, your files are uploaded to the Web site. The **Image Uploader** window appears and displays the Internet connection and upload status.

Image Uploader window

7. Go to http://www.imagestation.com to view your uploaded pictures or movies. Follow the on-screen instructions to access your ImageStation℠ account.

✍ The ImageStation Web site may ask you to complete a full login again if your current session is not active.

SonicStage Software

SonicStage software is a jukebox application that enables you to play and record from audio CDs and import digital audio files while maintaining copyright information. Taking advantage of Sony's copyright-protected ATRAC3 format for high-quality digital audio storage, SonicStage sports a music visualizer, a sleek player skin design, and a parametric equalizer for fine-tuning audio playback.

✍ This SonicStage software does not support CD backup, custom audio CD creation or custom MP3 CD creation with CD-R and CD-RW media.

Electronic Music Distribution (EMD) Services

EMD enables you to download music files via the Internet. To use Internet services that are compatible with the SonicStage software, you need:

- Access to the Internet from your computer. Sign up with an Internet Service Provider (ISP) and configure your computer for Internet access before using EMD services.

- An EMD service provider. Consult the provider for service information.

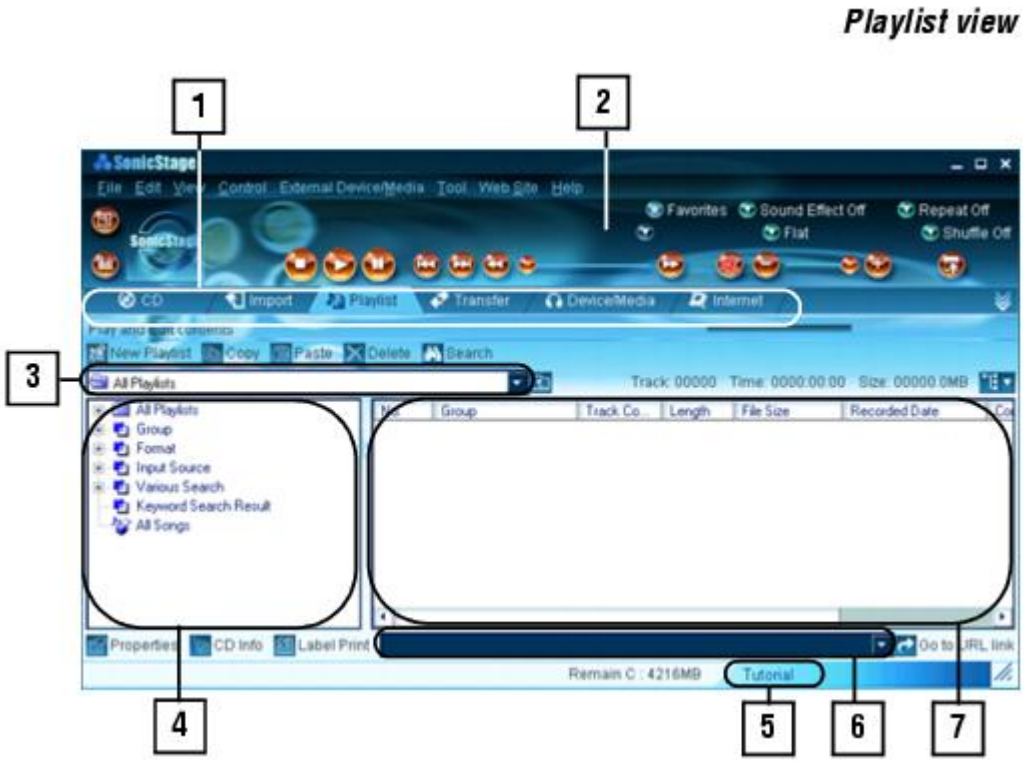
Starting SonicStage Software

1. Click **Start** in the Windows taskbar, and point to **All Programs**.
2. Point to **SonicStage**, and click **SonicStage**.
3. When you have registered with CDDB, the **Confirm the setup of SonicStage...** dialog box appears.
4. Click **Yes** to continue.

SonicStage feature tabs (Main window)

- **CD tab** — The contents of your inserted audio CD are displayed, enabling functions such as recording to the computer's hard disk drive.
- **Import tab** — Import MP3, WAV or audio files on your computer to a Playlist.
- **Playlist tab** — View the available Playlists as tree + list or list only.
- **Transfer tab** — View the available Playlists on your computer. You can transfer the audio files to an external device or media.
- **Device/Media tab** — View the status of your audio files, connected external device, or inserted media.
- **Internet tab** — The browser view displays your connection to the Internet, enabling you to locate audio files and use EMD services.

SonicStage main window



1 Feature tabs

Changes the screen view according to the selected feature.

5 Tutorial

Click to open or close the Tutorial feature.

2 Player control buttons

Controls playback functions, such as play, pause, stop, fast forward, and reverse. You can increase or decrease volume and switch view modes. **6 Internet address drop-down list (Playlist view)**

Displays Internet addresses associated with the currently selected song. Click Go to URL link to immediately connect to the Internet address displayed in the drop-down list.

3 Playlist drop-down list (Playlist view)

Displays available playlists and audio files. **7 File list view (Playlist view)**

Displays the contents of the Playlist selected in the file tree view.

4 File tree view (Playlist view)

Displays the Playlists available on your computer, enabling you to locate your audio files. Expand the views for the file list or Playlist drop-down using the Playlist switch button.

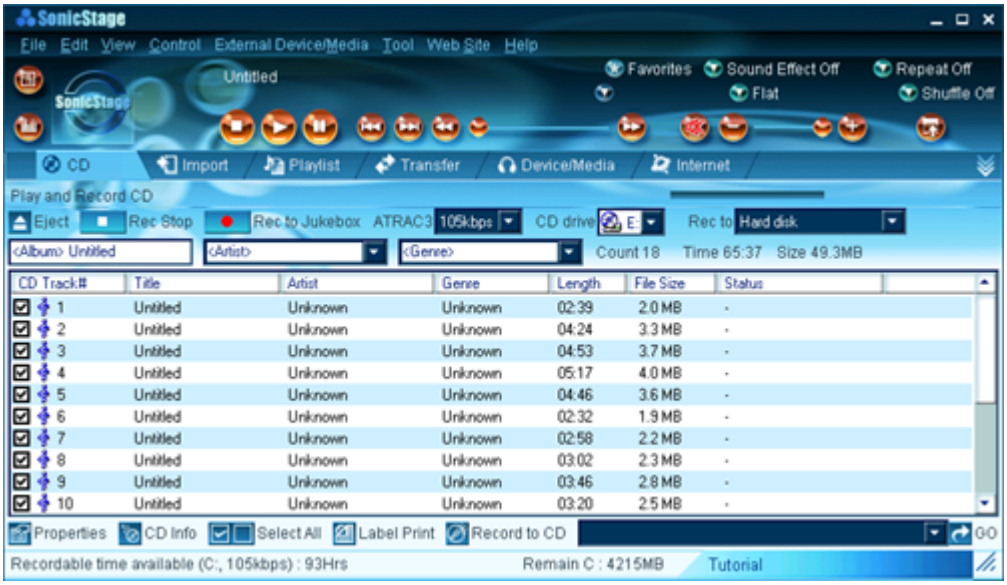
Recording from a CD

You can record songs from audio CDs and add them to playlists in SonicStage software.

When you record from an audio CD from your optical disc drive for the first time, the **CD Drive Optimization** dialog box appears. Click **Start** to verify your optical disc drive. After the verification is performed, recording begins.

1. Insert an audio CD into your computer's optical disc drive.
2. Click the **CD** tab.
3. Use the drop-down lists to select the ATRAC3 bit rate, CD drive, and Record To destination.

CD tab window



4. You can identify specific tracks on your CD by clearing the check marks from the tracks you don't want to record. You can clear all selected tracks by selecting the empty checkbox next to **Select All**, and then selecting the tracks you want to record.

   If your Internet connection is active, you can use the (CD Info) button to view the name of your CD and its song titles.

   The CDDB® (Compact Disc Database) Music Recognition Service registration wizard enables you to register with CDDB. You need Internet access from your computer to register and use this service. For more information regarding CDDB registration, click the **Help** button.

   The CD Info button feature is not supported for all audio CDs.

5. Click (Rec to Jukebox) to begin recording. When the recording is finished, the new playlist appears in the File tree view of the **Playlist** window.

Transferring songs (Check-In/Check-Out)

You can transfer songs between the playlists in the SonicStage software and external devices or media. For more information on using your external devices or media, see the instructions supplied with the device or media.

These instructions are for using the Check-In/Check-Out "1-step" method. For information on using another method, see "Changing the check-in/check-out settings" in the SonicStage software online Help file.

Check-Out

1. Connect the external device or insert the media into your computer.

2. Click the **Transfer** tab to display the **Transfer** window. Your computer automatically recognizes the connected external device or media and lists the content information in a new panel on the right side of the **Transfer** window.

Transfer window

3. Select the Playlist that contains the song that you want to check out. The songs in the playlist are shown in the **Playlist** view panel located in the center of the **Transfer** window.

4. From the **Playlist** view panel, select the song to be checked out. To check out more than one song at a time, hold down the Ctrl key and select the additional songs.

5. Click (Out), or drag the song to the desired position in the song list of the external device or media. Check Out begins.

   To cancel Check Out, click (Stop), or click **Cancel** in the **Processing** dialog box that is displayed during the Check Out process.

Check In

The songs that you transfer to external devices or media can only be checked in to the hard drive of the same computer from which the songs were checked out.

1. Connect the external device or insert the media into your computer.

2. Click the **Transfer** tab to display the **Transfer** window. Your computer automatically recognizes the connected external device or media and lists the content information in a new panel on the right side of the **Transfer** window.

3. Select the song to be checked in from the song list of the external device or media. To check in more than one song at a time, hold down the Ctrl key and click the additional songs.

4. Click (In), or drag the song(s) to the **Playlist** view panel. If you want to check in all of the songs in the external device or media, click (In All). Check In begins.

To cancel Check In, click (Stop), or click **Cancel** in the **Processing** dialog box that is displayed during the Check In process.

For more information about using SonicStage software, go to the online SonicStage Help. You can access the online help file as follows:

1. Click the **Start** button in the Windows taskbar, and point to **Programs**.
2. Point to **SonicStage**, and click **SonicStage Help**.

Additional features

- **SonicStage Tutorial —** SonicStage features are described in the Tutorial. The user-friendly interface instructs you on how to use all SonicStage features.

- **SonicStage Backup Tool —** You can back up and restore music, graphics, and information data managed by SonicStage software. You must be connected to the Internet to use the SonicStage Backup Tool.

- **Import audio files in various formats —** You can import audio files in various formats, such as the MP3 or WAV standards. You can also import audio files that comply with the Microsoft® Windows Media Technologies (WMT) standard, identified by .asf or .wma extensions. Manage your audio files through the Playlist feature of SonicStage software.

- **Manage imported songs on the Playlist —** Additional features are available when you register your imported songs through the Playlist feature of the SonicStage software. You can manage your music by creating your own list of songs categorized by genre or artist, displaying your song list in the Playlist feature, and arranging your songs in a customized order using the Playlist folders. Edit your music by combining multiple songs into a single song, or divide one song into two, by using the Combine and Divide features.

- **Simple mode —** The main SonicStage window viewed in Simple mode, is a smaller, compact version of Full mode. This may be convenient when you want to listen to music with SonicStage software, while using other applications, or whenever you feel the Full mode view is intrusive. The design of the main SonicStage window in simple mode can be changed by selecting a new "Skin," which enhances the window's appearance. The Simple mode feature enables you to perform playback operations only.

Network Smart Capture

Network Smart Capture manages the i.LINK®[1] connection between your computer and an i.LINK interface compatible digital camera or camcorder. You can capture and enhance video or still images to share with your family and friends over the Internet or through e-mail.

- The Network Smart Capture main window
- Capturing still images
- Capturing movie clips
- Capturing Web camera images
- Applying effects to your images and movies
- Managing your images and movies
- Using the ImageStation online service
- Getting more help

Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting i.LINK interface compatible peripherals to your computer, such as an optical drive or hard disk drive, make sure they are compatible with your computer's Microsoft® Windows® operating system and verify the required operating conditions of the devices.

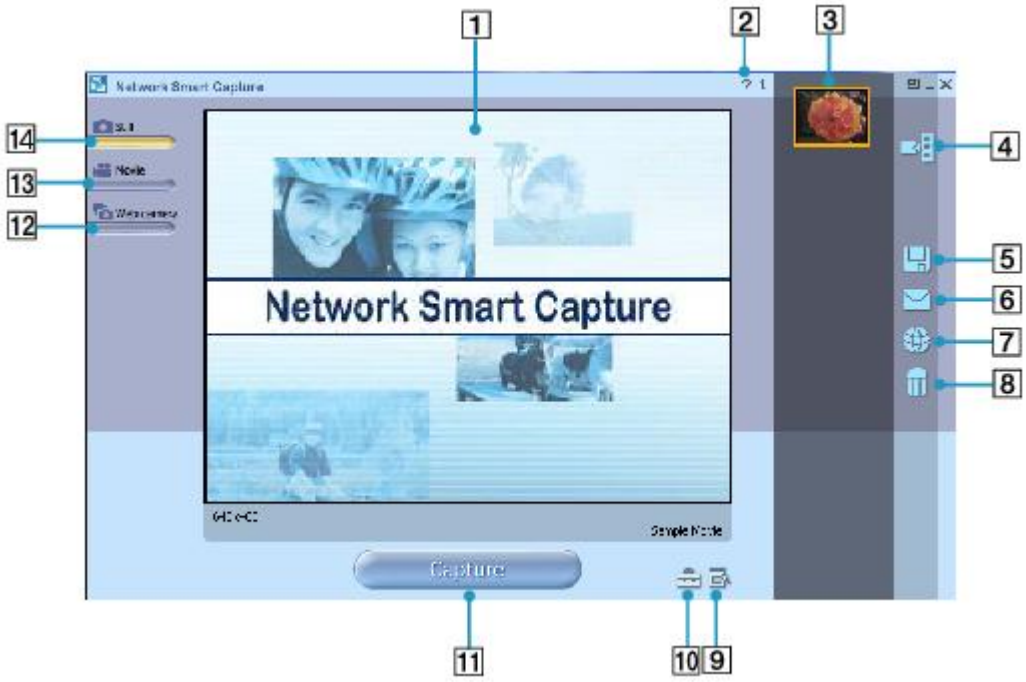
[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other.

The Network Smart Capture main window

Network Smart Capture opens with a pre-installed video clip in the Finder Window, indicating there is no data input from a digital camera or camcorder. When you connect your digital camera or camcorder to your system with an i.LINK® cable and turn it on, an image appears in the main window. Some cameras and camcorders need to have recording media inserted before an image can be displayed in the Finder Window. Consult the manual supplied with your digital camera or camcorder for more information.

Consult the picture and table below for a description of icons and buttons on the main window.

Network Smart Capture Main Window



	Button or Icon	Description
1	**Finder Window**	Displays images in real-time
2	**Help icon**	Displays Help documentation
3	**Data list**	Displays thumbnails of captured images
4	**Display Image icon**	Opens captured images in the Finder Window
5	**Save As icon**	Enables you to save an image to your hard disk
6	**Send by e-mail icon**	Attaches a captured image to an e-mail
7	**Upload to Image Station icon**	Sends captured images to ImageStation℠ online folder
8	**Delete icon**	Deleted captured images
9	**Select Effect icon**	Enables you to customize an image
10	**Change Setting icon**	Enables you to set preferences
11	**Capture button**	Records the image in the Finder Window

12 Web Camera button	Captures still images according to specified settings
13 Movie Mode button	Captures moving images
14 Still Mode button	Captures still images

Capturing still images

The following information tells you how to set preferences and capture a still image.

To set Still mode preferences

1. Open Network Smart Capture:

   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.

   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.

2. Connect your i.LINK® interface compatible digital camera or camcorder to your computer with an i.LINK cable (optional). An image appears in the Finder Window.

3. Click **Still** near the upper-left of the screen.

4. Click the **Change Setting** icon near the bottom of the screen to view setting options for your still image capture. The **Still Image Setting** window appears.

Still Image Setting Window

The Still Image Options window has three tabs:

- **Basic** — Choose between **Normal** or **Self-timer** capture modes, and select a folder destination for your images.

- **Capturing Format** — Select the image size in pixels, and adjust the image quality.

- **Common** — Enable or disable the sound and animation effects; enable or disable sample movie sound; and enable or disable automatic dialup connection for uploading images.

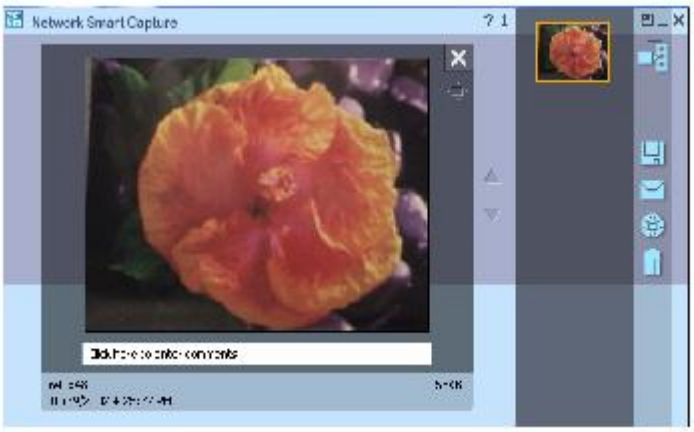
5. Click each tab to view options and set preferences. To apply effects to an image, see Applying effects to your images and movies.

To capture an image in Still mode

1. Use your digital camera or camcorder to locate the image you want to capture. When you see the desired image in the Finder Window, click **Capture**. You can capture a single image or several image at once.

   Your captured images are stored as thumbnail images in the Display List to the right of the Finder Window.

Image in Finder Window



2. Click the thumbnail images or arrows to the right of the Finder Window to view your captured images. As each image is captured, it appears in the Finder Window.

Capturing movie clips

The following information tells you how to set preferences and capture movie clips.

To set Movie mode preferences

1. Open Network Smart Capture:
   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
2. Connect your i.LINK interface compatible digital camcorder to your computer with an i.LINK® cable (optional). An image appears in the Finder window.
3. Click **Movie** to activate Movie mode.
4. Click the **Change Setting** icon to view the available options for your movie capture. The **Movie Clip Setting** window appears.

Movie Clip Setting Window

The Movie Clip Setting window has three tabs:

- **Basic** — Select a folder destination for your movies when recording video clips.
- **Capturing Format** — Adjust the image quality, reduce noise, and set the maximum recording time for your movie capture.
- **Common** — Enable or disable the sound and animation effects; enable or disable sample movie sound; and enable or disable automatic dialup connection for uploading images.

5. Click each tab to view options and set preferences. To apply effects to an movie, see Applying effects to your images and movies.

You can remove all special effects by clicking the No Effects button.

To capture a movie in Movie mode

1. Use your digital camcorder to locate the view(s) you want to capture. When you see the desired view in either the Finder Window or your camcorder's viewfinder, click **Record** to begin recording your movie. The Movie Player icon appears.
2. Click **Stop** when you have finished recording your movie. The first frame of your movie appears in the Data list to the right of the Finder Window. Network Smart Capture automatically stops recording according to the recording time set in the Movie Clip Setting window.
3. You can review your movie in the Finder Window by double-clicking the movie thumbnail in the data list.

Capturing Web camera images

The following information tells you how to set preferences and capture an image.

To set Web camera mode preferences

1. Open Network Smart Capture:
   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
2. Click **Web camera** to activate Web camera mode.
3. Click the **Change Setting** icon to view the available options for your image capture. The **Web Camera Setting** window appears.

Web Camera Setting Window

The Web Camera Setting window has five tabs:

- **Basic** — Select a folder destination to store your images and choose your dial-up setting.
- **Capture Interval** — Set your Web camera to capture images at intervals or whenever there is movement.
- **Send** — Set image upload preferences.
- **Capturing Format** — Select the image size in pixels, and adjust the image quality.
- **Common** — Enable or disable the sound and animation effects; enable or disable sample movie sound; and enable or disable automatic dialup connection for uploading images.

4. Click each tab to view options and set preferences. To apply effects to an image, see Applying effects to your images and movies.

Applying effects to your images and movies

You can add effects to real-time images or movies displayed in the Finder Window. You can also use a different effect for each picture.

To open the Effect Setting window

1. Click the **Select Capture Window** icon near the bottom of the screen to open the drop-down list of effects. Click to select digital zoom, effect, or no effect from the list. The **Effect Setting** window appears.

Effect Selection Window

2. Use the Previous Page or Next Page button to view the sample effects and click the sample to select it.
3. Click **Properties** to adjust settings for the effect you select.
4. Click **OK**.

To remove an effect

- Select **No Effect** from the drop-down list.

Managing your images and movies

The task buttons to the right of the Network Smart Capture window enable you to perform various functions with your images or movies.

- **Display Image** — Opens captured images in the Finder Window.
- **Save As** — Save still images in JPEG format and movie images in MPEG format to your desired location.
- **Send by e-mail** — Launches your e-mail program with a new message window containing the still image as an attachment.
- **Upload to ImageStation**℠ — Send your still images online to the ImageStation℠ Web site to share with your family and friends. The ImageStation service stores your still images online when you become a registered user. See Using the ImageStation online service.
- **Delete** — Discards any or all of your still images.

✍ You must be connected to the Internet before attempting to upload or e-mail your still images or videos.

Using the ImageStation online service

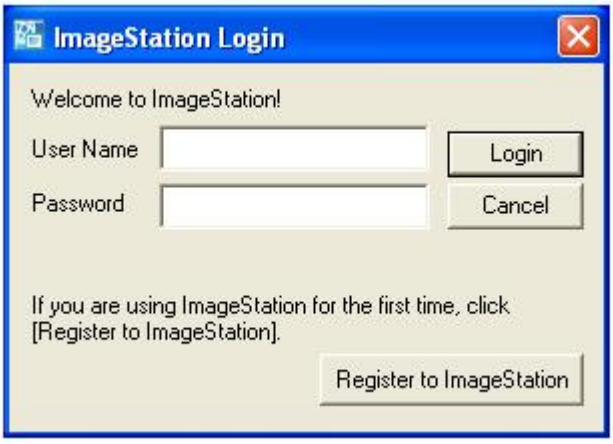
ImageStation℠ is an online service that allows you to store your images and movies on the Internet to share with family and friends. The ImageStation service requires an Internet connection and registration for the Web-based service. You must be connected to the Internet before uploading your images or movies with Smart Capture and ImageStation programs.

The ImageStation preview feature is available when you upload two or more pictures or a movie. No preview is shown if a single picture is being uploaded.

To upload images and movies to the ImageStation℠ Web site

1. Click the ImageStation icon on the right side of the screen. The ImageStation Login window appears.

ImageStation Login Window



- For first-time users, the ImageStation℠ registration wizard guides you through the initial registration process. Click **Register to ImageStation**, and follow the on-screen instructions.
- If you are already a registered member, type your login name and password, and click **Login**.

It is recommended that your movie file size not exceed 254 MB if compressed or 2 GB if not compressed. Large movie files take longer to upload to the ImageStation Web site.

2. Go to http://www.imagestation.com to view your uploaded pictures or movies. Follow the on-screen instructions to access your ImageStation account. The ImageStation Web site may ask you to complete a full login again, if your current session is not active.

Getting more help

For more information about Network Smart Capture, see the program's online Help.

To view the online help

- (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Help** from the submenu.

  (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Help** from the submenu.

- Click the Help icon on the Network Smart Capture window.

Network Smart Capture Help icon

PictureGear Studio Software

PictureGear Studio software is designed to creatively manage your digital pictures. With its easy-to-use features, you can quickly load images from your digital camera or camcorder, print high-quality photos, create custom labels, and design personalized photo albums or binders to share with friends and family.

PictureGear Studio main window

Photo albums, binders, and photo collections can only be viewed or edited using PictureGear Studio software. To share a PictureGear Studio creation over the Internet or by using another computer, use the Export feature. See the section, To export a photo album.

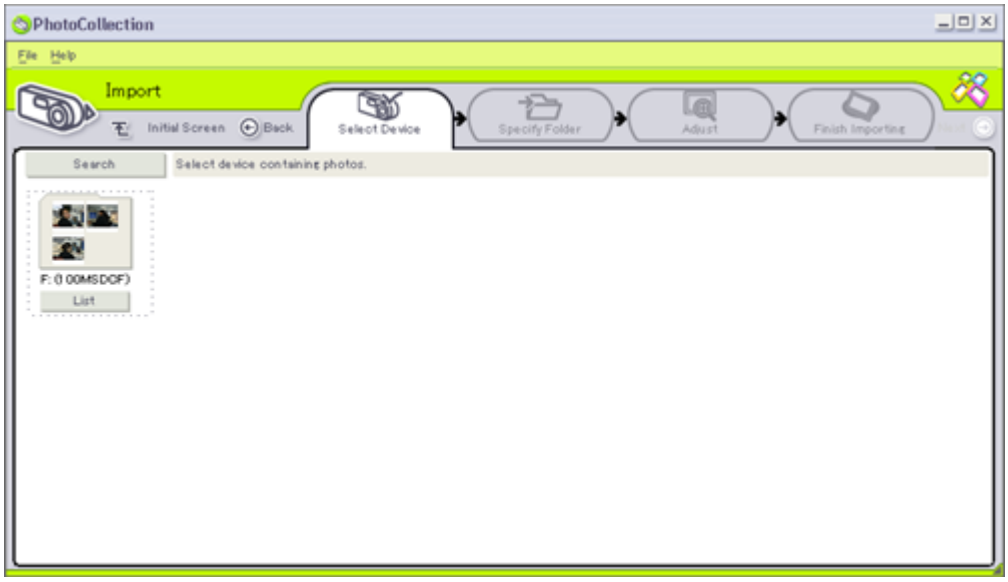
Using the Import Photo feature

Capture and import the pictures from your digital camera or camcorder to your computer. You can select your favorite pictures and place them in handy folders for future use.

1. Click **Start** in the Windows taskbar, and point to **All Programs**.
2. Point to **PictureGear Studio**, and click **PictureGear Studio**.
3. Click **Import Photo**. Your connected digital camera, camcorder, or Memory Stick® media is displayed in a **Select Device** window.

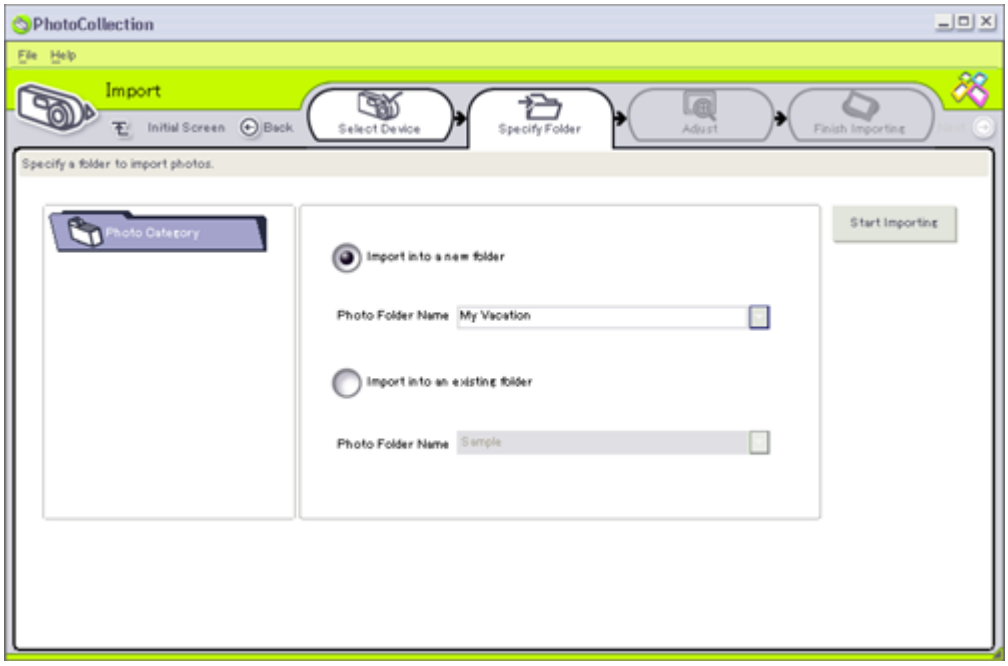
Connect your digital camera or camcorder to your computer, or insert your Memory Stick media into the appropriate slot, before attempting to import pictures.

Select Device window



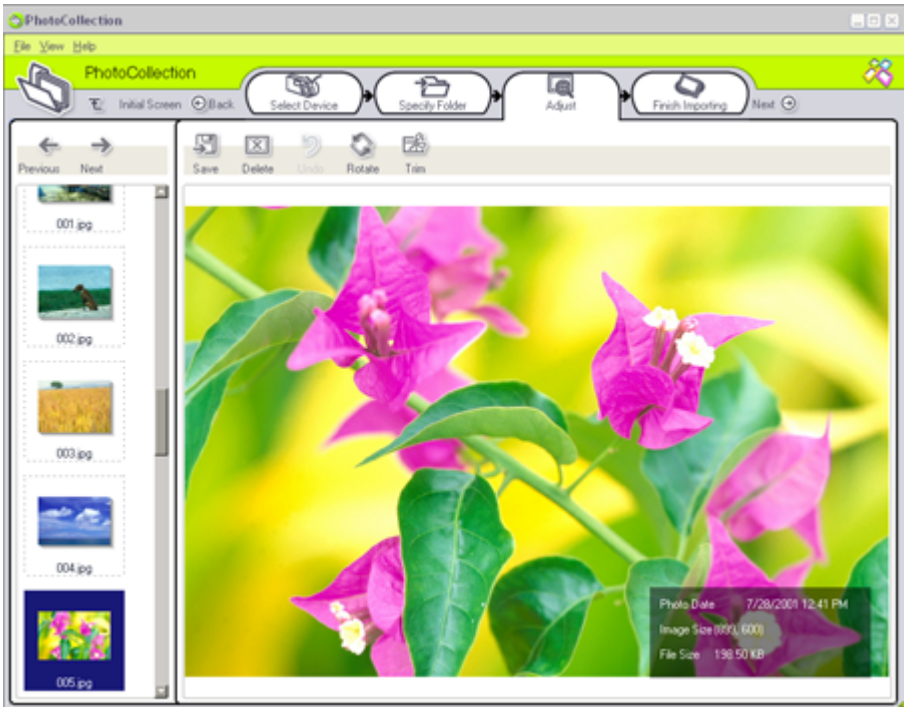
4. Click **List** to view all pictures that are located on the device or media. Make your selections and click **Import Selected Photos**. A **Specify Folder** window appears.

Specify Folder window



5. Select a folder option. If you are importing to a new folder, type in the folder name before clicking **Start Importing**. An **Adjust** window appears.

Adjust window



6. Click to make any desired adjustments to the pictures. The Adjust window displays an enlarged version of the picture on the right and thumbnail versions on the left.

   - **Save** to relocate the individual picture to a new folder.
   - **Delete** to remove the picture from the photo collection.
   - **Rotate** to change the picture's position.
   - **Trim** to crop the picture or capture a specific area.

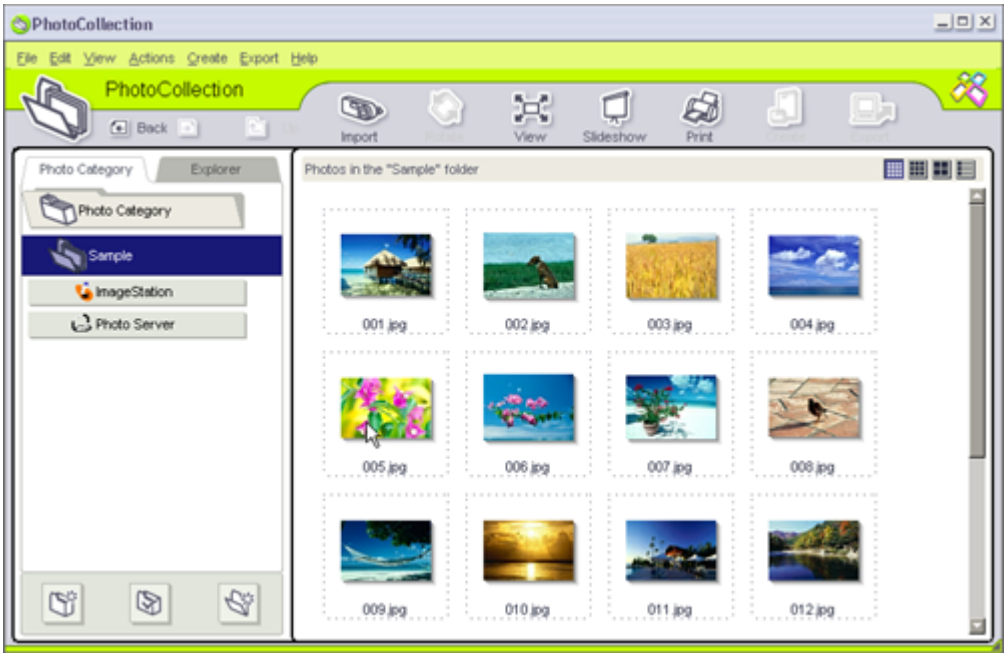
7. Click **Finish Importing** to save the imported pictures in a photo collection.

Using the PhotoCollection feature

You can organize and manage your imported pictures on your computer's hard drive or from your ImageStation℠ account.

1. Click **PhotoCollection**. A list of available photo sources is displayed on the left, with the selected source's contents displayed as thumbnail pictures on the right.

PhotoCollection window



2. From the thumbnail view, click to select pictures. Hold down the **Ctrl** key while clicking, to select several pictures. Press the **Ctrl+A** keys to select all of the photos in a folder.

3. Manage your pictures with these additional tools and features:

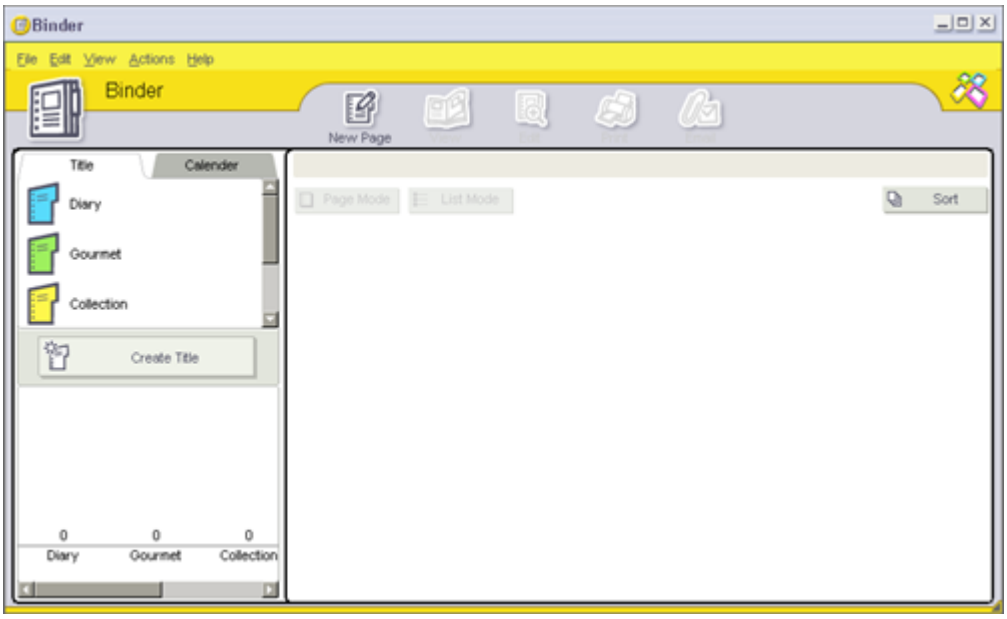
   - **Rotate** to change the picture's position.
   - **View** to enlarge a thumbnail view.
   - **Slideshow** to place the selected pictures into an organized slideshow, customizing the slideshow settings with the icon toolbar at the top of the slideshow screen.
   - **Print** to set up your photos and select paper to make prints.

Using the Binder feature

You can add comments to your favorite photos, add custom backgrounds, clip art, and stamps, or showcase your own drawing talent. Add, remove, or change your designs to create your own unique photo art.

1. Click **Binder**. A list of binder styles is displayed on the left. When you add your pictures to a binder, they are displayed as thumbnails on the right.

Binder window



You can create your own custom binder styles by clicking **Create Title**.

2. Select a binder style, then click **New Page**. Available photo sources are displayed as thumbnails.
3. Click to select a photo. An information form appears.
4. Fill in your information and click **OK**. An art palette window appears.

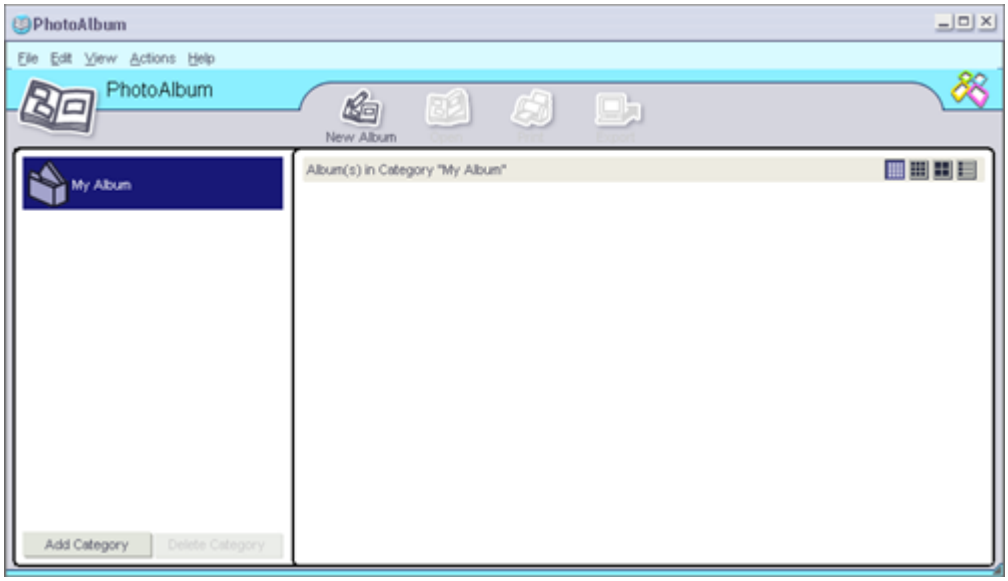
   To create an original page with art or stamps, use the decoration features on the right by clicking on the desired feature and applying it to your photo.
5. Click **Save** to add the new page to your binder.

Using the PhotoAlbum feature

Organize your memorable photos in an electronic photo album. You can share your custom photo albums with friends and family.

1. Click **PhotoAlbum**.

PhotoAlbum window

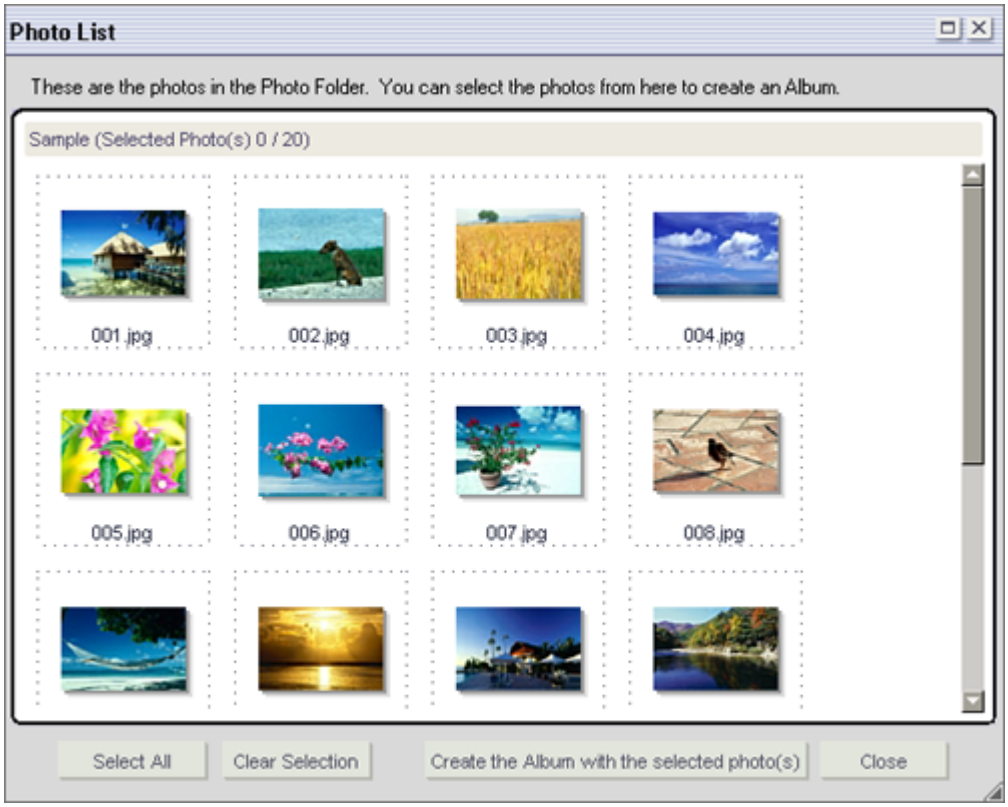


2. Click **New Album**. The Select Photo area appears.

✍ If you want to work on a previously created album, do not click **Create New Album**. Instead, select the desired album from the Album Collection view on the right side of the window.

3. To select the photos you want to include in your album from available folders, click **List**. The **Photo List** window appears.

Photo List window

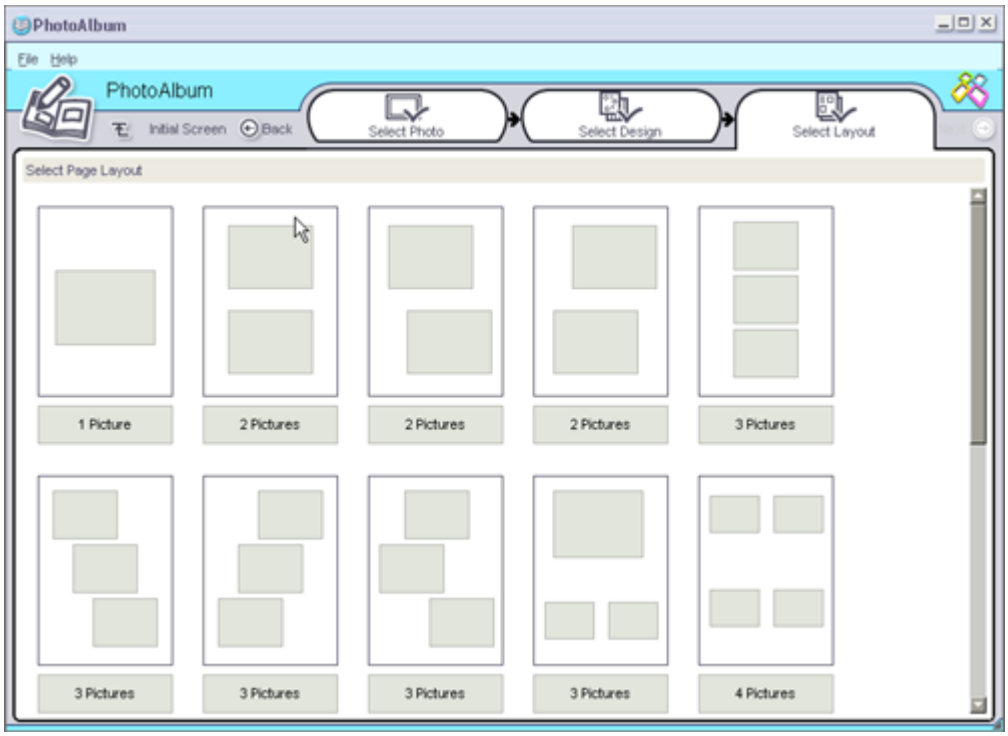


4. Click **Create the Album with the selected photo(s)** after making your picture selection(s). A **Select Design** window appears.

Select Design window

5. Click to select a design layout for your album. Use the scroll bar to view all available album designs. A **Select Layout** window appears.

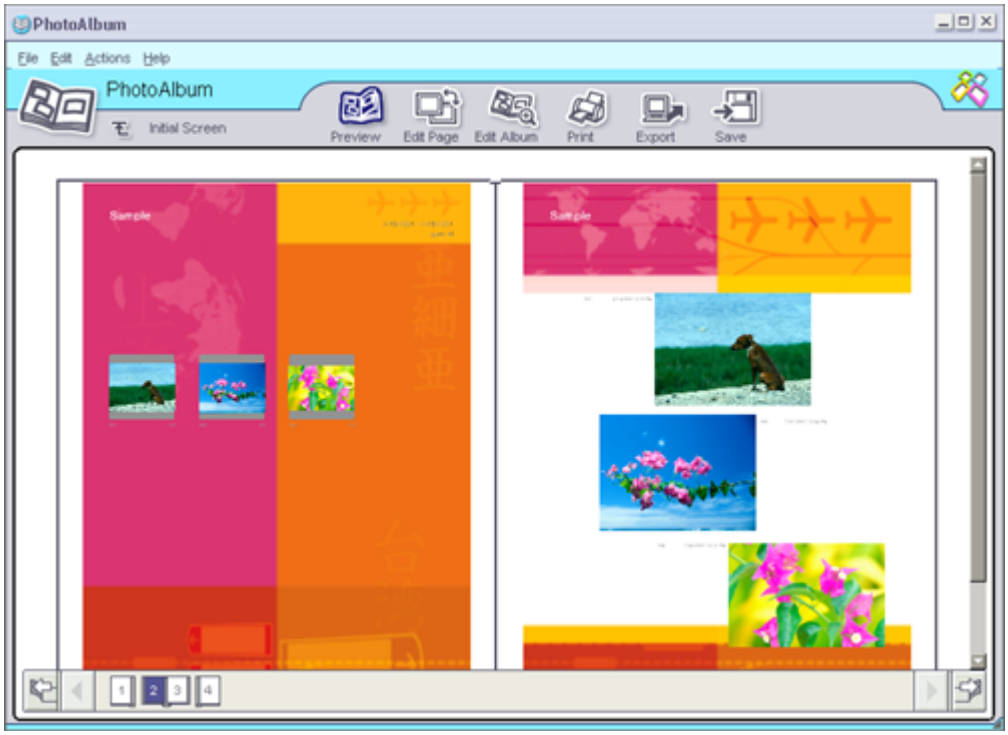
Select Layout window



6. Click to select a page layout for your album. Use the scroll bar to view all available layout designs. A preview of your selected design and page layout is displayed.

   Scroll through your album using the book icons at the bottom of the window.

Album preview window



7. Click **Edit Album** to make changes to your album. Customize your album by adding more pictures, pages, decorations, or comments, or by deleting pages.

   Click **Edit Page** to customize a page in your album. You can customize with your own drawing, stamps or other decorations.

8. Click **Save**. The Save Album dialog box appears.

9. Enter a name for your album and click **OK**.

Photo albums can only be viewed or edited using PictureGear Studio software. To share a PictureGear Studio creation over the Internet or by using another computer, use the Export feature.

To export a photo album

There are three export formats available:

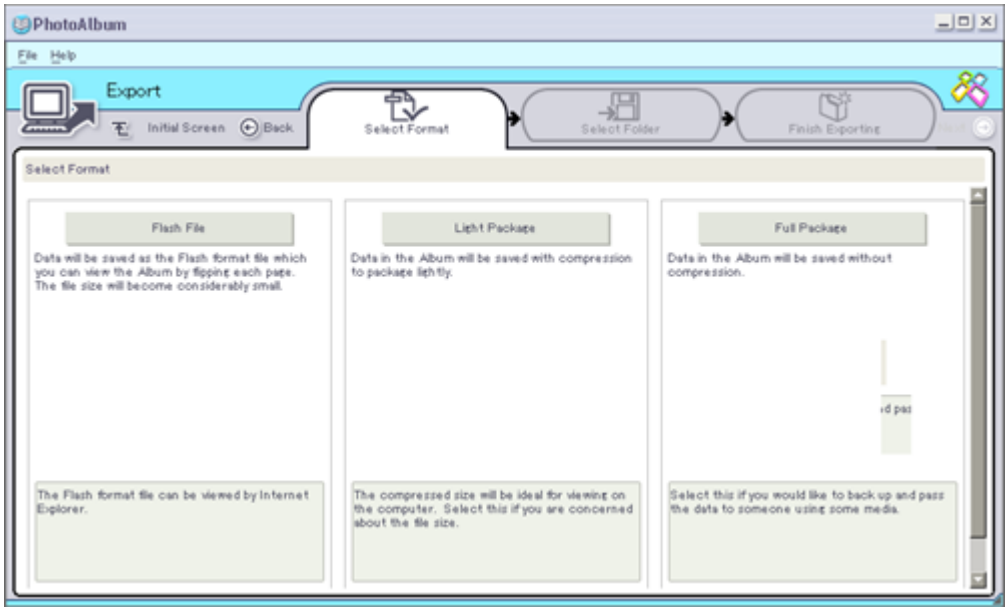
- Export as a **Flash File** to create a small file that can be viewed using Microsoft® Internet Explorer.
- Export as a **Light Package** to create a compressed file that can be viewed on a computer.
- Export as a **Full Package** to create an uncompressed file to be saved to recordable media, such as a CD-R/CD-RW or Memory Stick® media.

Export your completed photo album to enable viewing over the Internet, with another computer, or saving to a recordable media.

1. Create a photo album, as described in Using the PhotoAlbum feature.

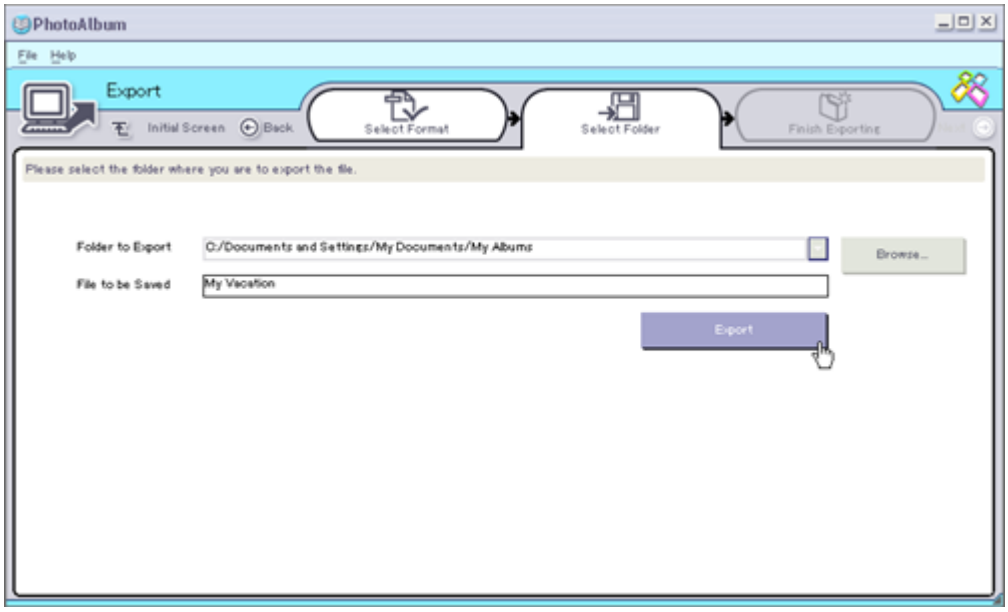
2. Click Export. A **Select Format** window appears.

Select Format window


PhotoAlbum
File Help
Export
Initial Screen
Back
Select Format
Select Folder
Finish Exporting
Select Format
Flash File
Data will be saved as the Flash format file which you can view the Album by flipping each page. The file size will become considerably small.
Light Package
Data in the Album will be saved with compression to package lightly.
Full Package
Data in the Album will be saved without compression.
The Flash format file can be viewed by Internet Explorer.
The compressed size will be ideal for viewing on the computer. Select this if you are concerned about the file size.
Select this if you would like to back up and pass the data to someone using some media.

3. Click to select an export format. A **Select Folder** window appears.

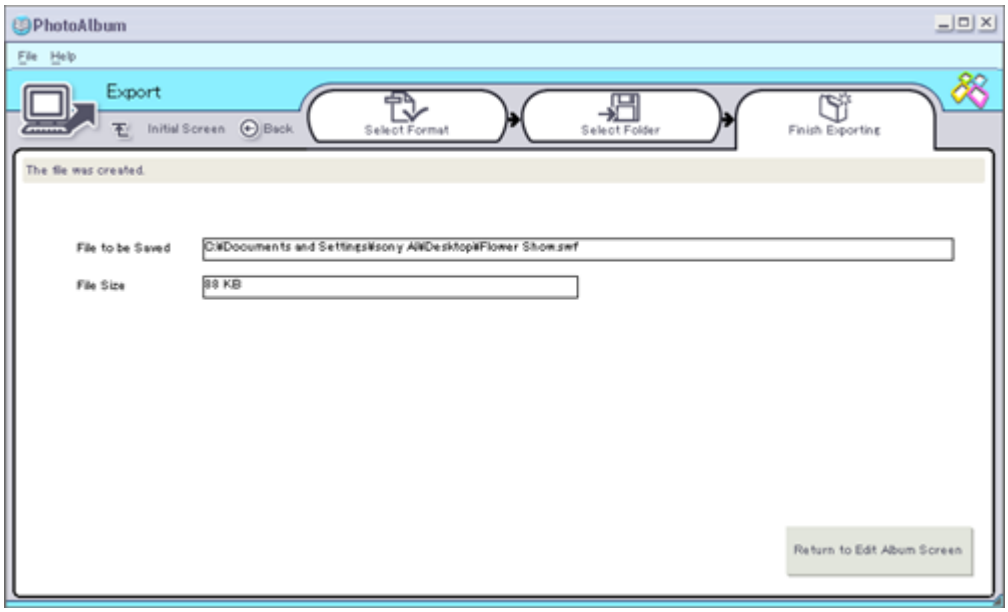
Select Folder window



4. Click **Browse** and navigate to the destination folder. Enter a file name, if desired.

5. Click **Export**. A progress window appears briefly.

Finish Exporting window



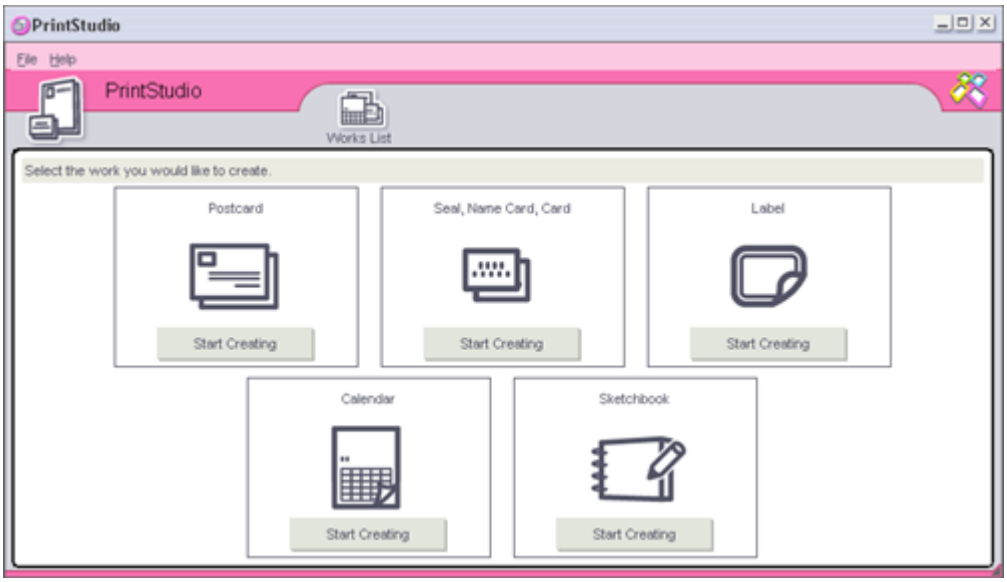
6. An export completion message window appears, displaying the file name and file size. Click **Return to Edit Album Screen**.

Using the PrintStudio feature

Use PrintStudio to design original postcards, calendars, art, and labels using your favorite pictures.

1. Click **PrintStudio**. The PrintStudio window appears.

PrintStudio window



2. Select the item you want to create and click **Start Creating**. The initial creation window appears.

   The initial window varies, depending on the item you are creating.

3. Make selections for the picture(s), design layout, and custom decoration for the item you wish to create.

4. Set the number of copies to be printed and select a connected printer. Click **Print**.

Use the appropriate paper when creating items, such as postcards, labels or business cards.

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Internet Connections

This section describes the basic steps for setting up your dial-up or Ethernet connection to the Internet. The Internet Connection Wizard guides you through the process of connecting to the Internet and choosing an Internet service provider (ISP) or setting up an existing account. When you connect to the Internet, you can register your VAIO® computer, use online services, and gain access to Sony Computing Support.

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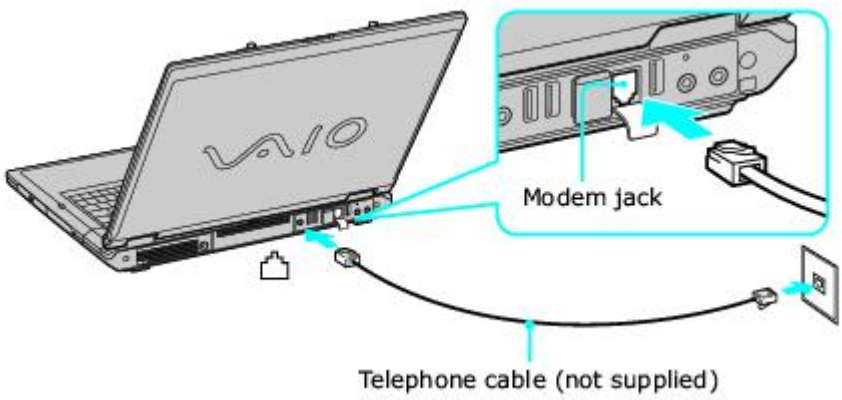
Setting up a dial-up Internet connection

Before you can connect to the Internet, you need to connect your computer to a telephone line via a telephone cable (not supplied). Once you set up your telephone cable, you're ready to connect to the Internet.

To connect a telephone cable

1. Locate the Modem jack on your computer. For location information, see the Connecting a Telephone Cable illustration.
2. Plug one end of the telephone cable into the Modem jack. Make sure it clicks into place.
3. Plug the other end into the wall jack.

Connecting a Telephone Cable



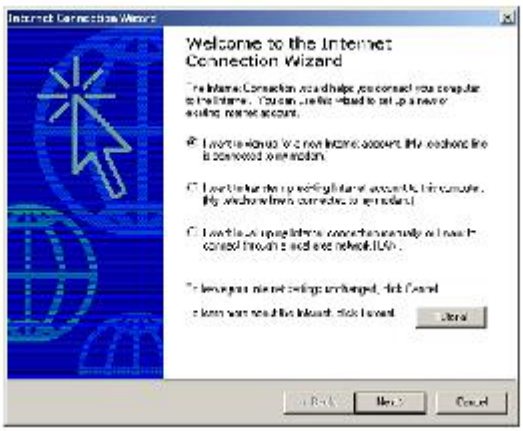
Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple telephone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a telephone cable coming through a splitter, the modem or connected device may not work properly.

To set up a dial-up connection to the Internet

1. Connect your computer to a telephone line. See To connect a telephone cable for more information.
2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard



3. Choose one of the options and click **Next**.
4. Follow the on-screen instructions.

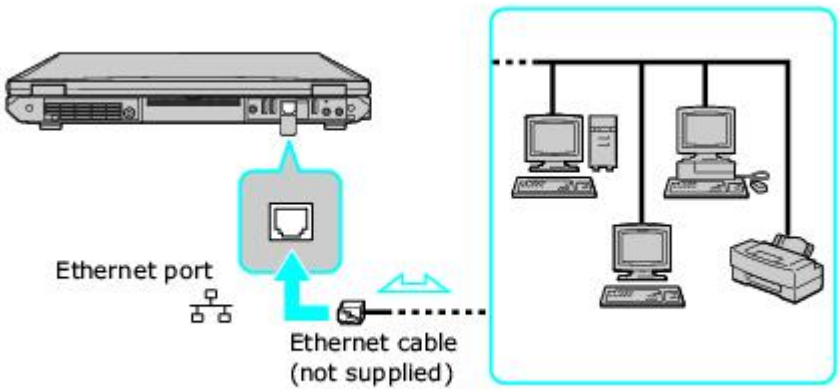
Setting up an Ethernet Internet connection

Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps.

To connect an Ethernet cable

1. Locate the Ethernet port on your computer. For location information, see the Connecting an Ethernet Cable illustration.

Connecting an Ethernet Cable

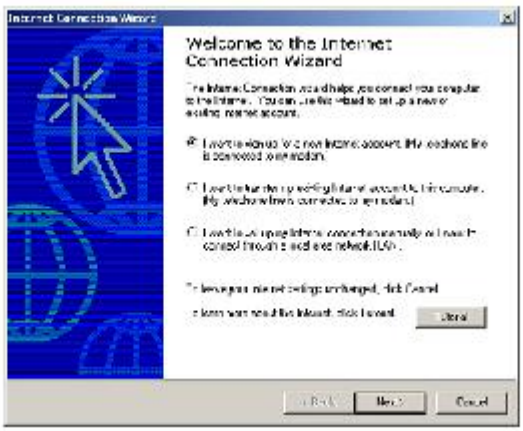


2. Plug one end of the Ethernet cable into your computer's Ethernet port and the other into the network connection.

To set up an Ethernet connection to the Internet

1. Connect your computer to a network connection. See To connect an Ethernet cable for more information.
2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard



3. Select the option **I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)**.
4. Click **Next, and select I connect through a local area network (LAN)**.
5. Click Next, and follow the on-screen instructions.

Customizing your Internet connection

The Internet Properties dialog box enables you to change the way you view the Internet. You can change your home page, fonts, language, and colors. You can also regulate content and set browsing preferences.

To open the Internet Properties dialog box

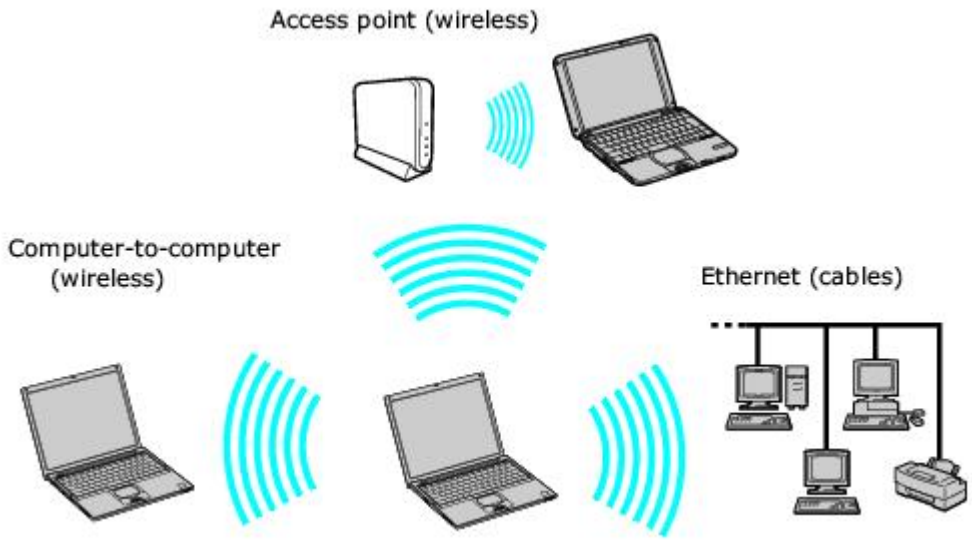
1. Click **Start** on the Windows® taskbar, point to Settings, **Control Panel**, and click Internet Options. The **Internet Properties** dialog box appears.
2. Click the tabs to view options.
3. Make changes, and click **Apply** to activate your changes.
4. Click **OK**.

Network Connections

With a Sony computer, you can easily set up or connect to a variety of networks. The Internet Connection Wizard and Dial-Up Connections make it easy to gain access to networks (LANs) using wireless, Ethernet, or dial-up connections.

For more information about networking, click **Start**, **Help**, and then **Networking**.

*Types of Networks**



* The computers in this graphic are representative of some possible network connection choices and may not be identical to the model you purchased.

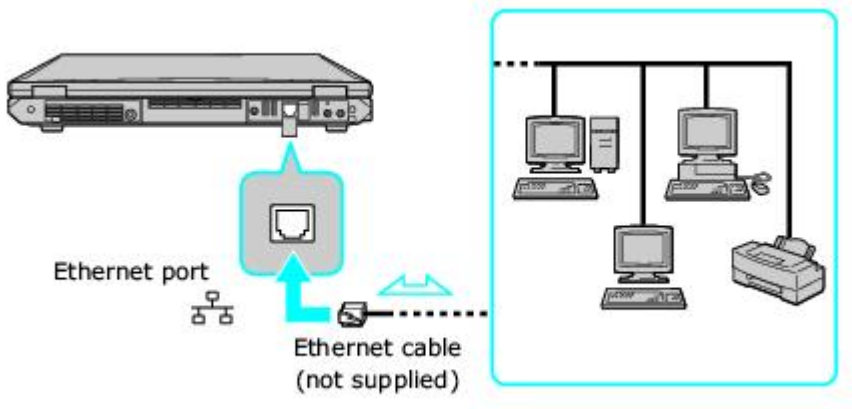
Using Ethernet and dial-up connections

For setting up local area networks (LANs), Ethernet is a widely installed technology. Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps.

To connect to a local area network using a telephone or Ethernet cable

1. Connect an Ethernet or telephone cable to your computer. See Connecting an Ethernet Cable for more information.

Connecting an Ethernet Cable



2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Network and Dial-Up Connections**. The **Network and Dial-Up Connections** window appears.
3. Click Make New Connection. The Network Connection Wizard window appears.
4. Click **Next**, and follow the on-screen instructions.

Only connect 10BASE-T and 100BASE-TX cables to the Ethernet port. Do not connect any other type of network cable or any telephone cable. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, see Using Ethernet and dial-up connections or contact your network administrator.

You can connect to your company network from a remote location and use data, programs, and network resources. See Microsoft® Windows® Help by clicking **Help** from the **Start** menu, and then clicking **Networking** in the left panel.

To connect to a remote network using a telephone or Ethernet cable

1. Connect an Ethernet or telephone cable to your computer. See To connect an Ethernet cable and Setting up a dial-up Internet connection for more information.
2. From the **Start** menu, point to **Programs**, **Accessories**, **Communications**, and click **Networking and Dial-up Connections**. The **Networking and Dial-up Connections** window appears.
3. Click **Make New Connection**. The **Networking Connection Wizard** appears.
4. Click **Next**.
5. Follow the on-screen instructions.

Using wireless network connections (selected models only)

A wireless local area network (LAN) is a network in which you can connect to a LAN through a wireless (radio) connection. You can opt to purchase a Sony Wireless LAN Access Point to set up a LAN.

The wireless LAN access point is designed for building a wireless LAN environment. Because a wireless LAN configuration requires no wiring, you can operate multiple computers more freely than ever before.

Your computer is equipped with a built-in mini PCI card that allows for wireless connections. For information about your computer's wireless capabilities, see the printed VAIO® Computer Specifications, which accompanied your computer.

For more information on Sony Wireless LAN, go to http://www.sonystyle.com/vaio.

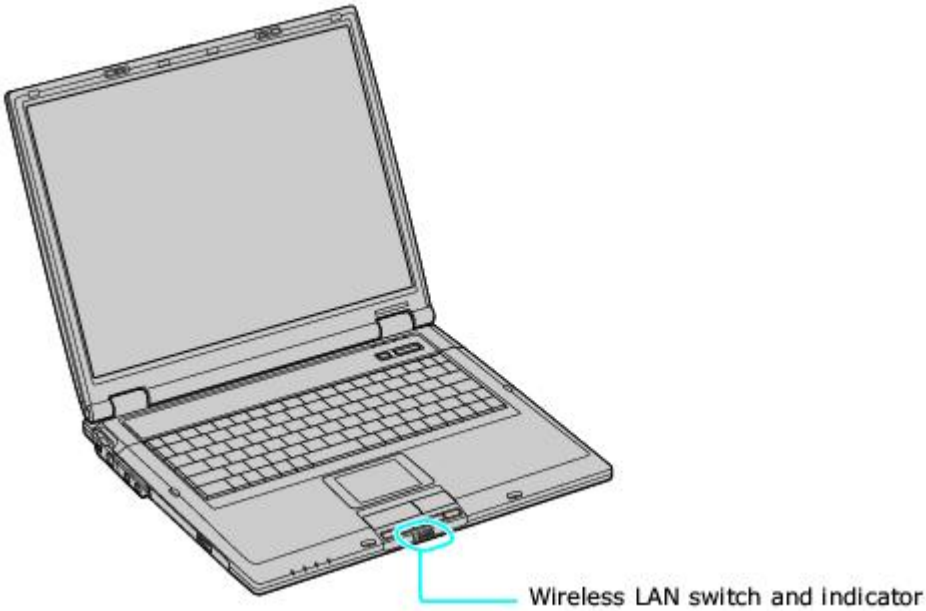
There are two types of wireless connections:

- An infrastructure network is one that extends an existing wired local network to wireless devices by providing an access point. The access point bridges the wireless and wired LAN and acts as a central controller for the wireless LAN. The access point coordinates transmission and reception from multiple wireless devices within a specific range.
- A computer-to-computer (ad-hoc) network is one in which a local network is created only by the wireless devices themselves, with no other central controller or access point. Each device communicates directly with other devices in the network. You can set up an ad-hoc network easily at home.

To connect to a wireless network

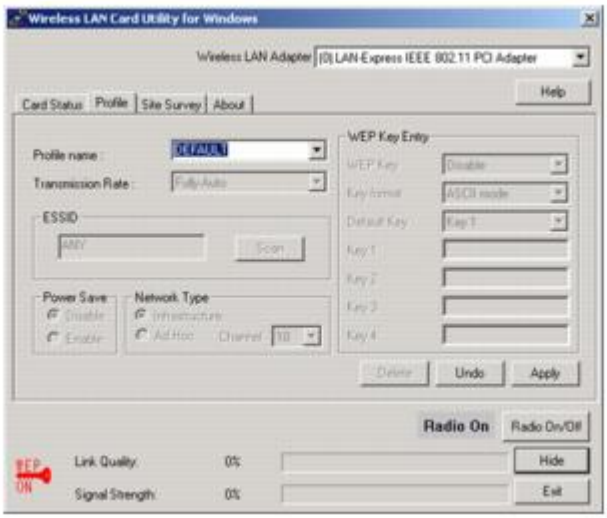
1. Make sure an access point is set up. See the instructions that accompanied the access point for more information.
2. Move the Wireless LAN switch to **ON**.

Turning on the Wireless Network Switch



3. Click **Start**, point to **Programs**, and click **Wireless LAN Configuration Utility**. The **Wireless LAN Utility** icon appears on the right side of the taskbar.
4. Click the **Wireless LAN Utility** icon to open the **Wireless LAN Card Utility for Windows** dialog box.
5. Click the **Profile** tab.

Wireless LAN Card Utility for Windows



6. Type a name in the **Profile Name** box.

7. In the **Transmission Rate** box, make sure **Fully Auto** is selected. By selecting **Fully Auto**, your computer automatically searches for the strongest (radio) signal.

8. In the **ESSID** box, type the name of the access point or click **Scan** to select an access point.

9. Select a **Power Save** option.

10. In the **Network Type** box, select **Infrastructure** to connect to or set up a network to access point (host) connection or click **Ad Hoc** to connect to or set up a computer-to-computer connection.

11. If the network was not set up with an encryption key, click **Apply**.

12. If the network was set up with an encryption key:

    1. In the **WEP Key** box, select **40bit/64 bit** for IEEE 802.11b access points.

    2. In the **Key format** box, select either **ASCII mode** or **HEX mode**, depending on the encryption key.

    3. In the **Default Key** box, select the correct encryption key.

    4. Type the key name in the appropriate key box.

    5. Click **Apply**.

To disconnect from a wireless network

- Move the Wireless LAN switch to **OFF**. The Wireless LAN indicator turns off.

Checking your network connection status

To check the status of your network connection

1. Click the **Wireless LAN Utility** icon **Start** to open the **Wireless LAN Card Utility for Windows** dialog box.
2. Click the **Profile** tab.
3. Click **Radio On/Off**. The **Link Quality and Signal Strength** boxes show the connection status.

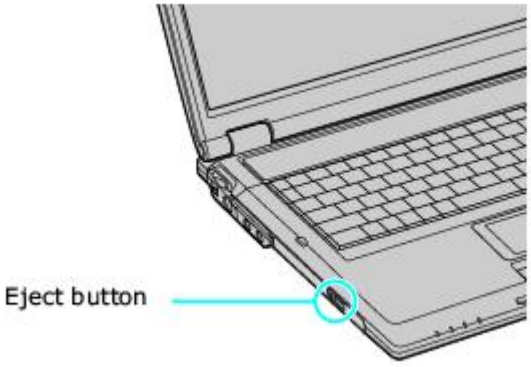
Inserting and Ejecting CDs or DVDs

Avoid using adhesive labels to identify your CDs or DVDs. Adhesive labels may damage the optical drive if they come off while the disc is in the drive.

To insert a disc

1. Turn on the computer or exit a power saving mode (Standby or Hibernate) if one is active. For more information, see Using power saving modes.
2. Press the Eject button on the optical drive cover to open the drive tray. The drive tray slides out.

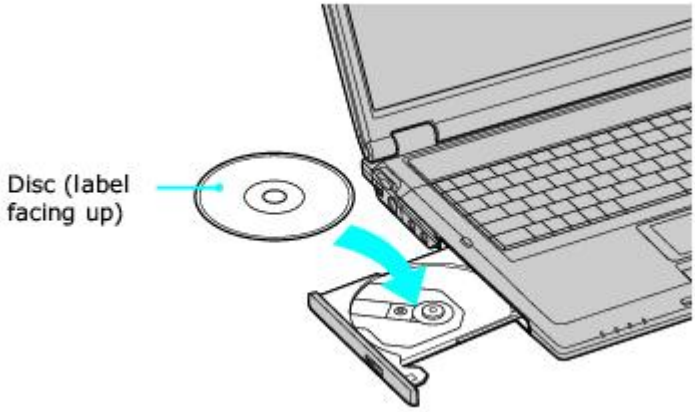
Opening the Drive Tray



3. Place a disc on the drive tray with the label facing up.

   You can play some DVDs on both sides. Insert this type of DVD with the side you want to play facing up.

Inserting a Disc



4. Press the disc onto the tray until the disc clicks securely into place.

   If you do not seat the disc firmly over the hub, the disc may come loose while it is in the drive. A loose disc may damage the optical drive and make opening the drive tray difficult.

5. Push the drive tray gently to close it. The Busy indicator on the drive cover blinks while your computer is reading data from the drive.

To eject a disc

1. Turn on the computer or exit a power saving mode (Standby or Hibernate) if one is active. For more information, see Using power saving modes.
2. Close Programs that access the optical drive, and wait for the Busy indicator on the drive cover to turn off.
3. Press the Eject button on the drive cover to open the drive tray. The drive tray slides out.

✍ If the Eject button does not work, turn off the computer and insert a thin, straight object (such as a paper clip) into the manual eject hole next to the Eject button.

4. Lift the disc from the drive.

5. Push the drive tray gently to close it.

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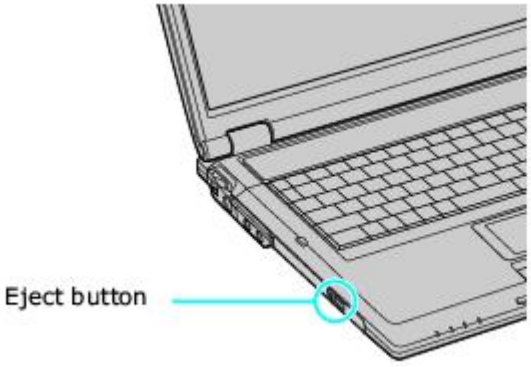

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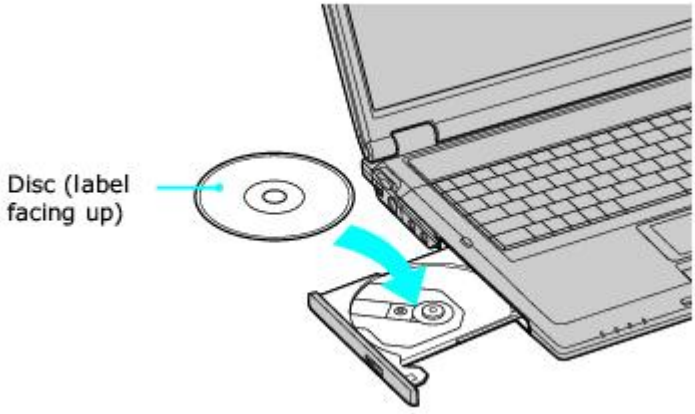

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4. Lift the disc from the drive.

5. Push the drive tray gently to close it.

Copying and Playing CDs and DVDs

Your computer plays and records CDs and DVDs, depending on the model you purchased. Check your computer specifications for the type of optical drive installed on your computer and use the table below to see which types of media your optical drive supports.

Optical Drive	Media (disc) Support
CD-ROM	Plays CD, CD-R, and CD-RW
CD-RW	Plays CD, CD-R, and CD-RW Records to CD-R and CD-RW
CD-RW/DVD-ROM	Plays CD, CD-R, and CD-RW Records to CD-R and CD-RW Plays DVD and most DVD-R and DVD-RW
DVD-RW	Plays CD, CD-R, and CD-RW Records to CD-R and CD-RW Plays DVD, DVD-R, and DVD-RW Records to DVD-R and DVD-RW
DVD±RW	Plays CD, CD-R, and CD-RW Records to CD-R and CD-RW Plays DVD, DVD-R, DVD-RW, DVD+R and DVD+RW Records to DVD-R, DVD-RW, DVD+R, and DVD+RW

If you plan to use an external optical drive, connect the drive before you begin.

Playing CDs

Before you play an audio CD, you may need to enable your computer's audio feature.

To enable the audio feature

1. Click **Start** on the Windows® taskbar, and point to Settings, **Control Panel**, and click **System**. The **System Properties** dialog box appears.

   As a shortcut, you can press **Fn** + **Windows** key + **Insert** to open the **System Properties** dialog box.

2. Select the **Hardware** tab, and in the **Device Manager** box, click **Device Manager**. A window with a listing of the computer's hardware devices appears.
3. Double-click the optical drive name to open the submenu.
4. Double-click the listed drive name, and select the **Properties** tab.
5. Click to select the **Enable digital CD audio for this CD-ROM device** check box if it is not already selected.
6. Click **OK**.

To adjust the volume for playing CDs and DVDs

Some programs have built-in volume controls, which you can adjust. If there are no volume controls, then adjust the volume of your computer's built-in speakers by doing one of the following:

- Using the Function keys. An on-screen display may appear, notifying you when a change occurs.
  - To increase volume, press the **Fn** and **F4** keys, and then press or .
  - To decrease volume, press the **Fn** and **F4** keys, and then press or .
- Using the Volume icon.
  - Double click the **Volume** icon on the **Taskbar Notification** area. The **Volume Control** dialog box appears.
  - In the **Volume Control** and **CD** columns, move the **Volume** sliders up to increase volume and down to decrease volume.

To play an audio CD

1. Insert the disc into the optical drive.
2. If nothing appears on the desktop once you insert an audio CD disc, then click **Start**, point to **Programs**, and click to open a CD program, such as SonicStage.

Copying files to CDs

Before you copy files to a CD-RW or CD-R disc, read the following notes to avoid a computer malfunction and ensure the best results:

- Deactivate the screen saver and exit anti-virus software.
- Deactivate memory-resident disc utilities to avoid data loss.
- Disable the FindFast program if it is installed on your computer. Click **Start** and point to **Programs** to see a list of programs on your computer.
- Connect and use the AC adapter to power your computer or make sure your battery is at least 50 percent charged. See Powering Your Computer for more information.

To copy files to a CD-RW or CD-R

1. Insert a blank CD-R or CD-RW disc into the optical drive. For more information, see the Inserting and Ejecting CDs or DVDs section.
2. Launch a CD program, such as SonicStage. Click Start on the Windows® taskbar and point to Programs to locate the program. The SonicStage help guide is located within the same submenu as the program itself.

Do not strike or shake the computer while writing data to a disc.

Playing DVDs

You can play DVDs in your computer's optical drive and view the video on your LCD screen or on a TV.

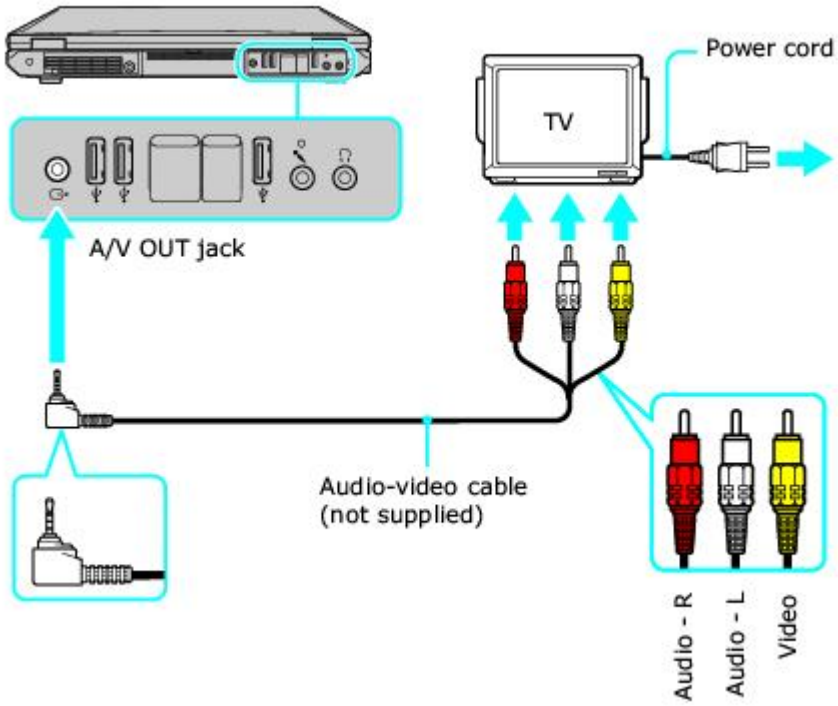
Connecting your computer to a TV

Your computer is equipped with an A/V OUT jack, which enables you to connect your computer to a TV. To locate the A/V OUT jack on your computer, see "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.

To connect a TV to your computer

1. Locate the A/V OUT jack on the computer.
2. Plug one end of an audio-video (AV) cable (not supplied) into the A/V OUT jack.
3. Plug the other end of the AV cable into the audio and video ports on the TV.

Connecting a TV



4. Switch the TV input channel to external input.

See the guide that accompanied your TV for information on how to switch to external input.

Playing DVDs on a TV

To play a DVD

1. Close all open programs.
2. Disable the screen saver and the virus checker.
3. If you are using battery power, set the power management profile to DVD. Follow these steps:
    1. Close all open programs.
    2. Right-click the **CPU** icon or Profile icon , depending on the model you purchased, on the **Taskbar Notification** area.
    3. Select Edit/Create **Profiles** from the shortcut menu.
    4. Select **DVD** from the submenu menu. You can also select **Automatic Profile Selection**, which sets the power management profile to **DVD** whenever a DVD is inserted into the optical drive. See Conserving Battery Power for more information.
4. Connect the TV to the computer. See Connecting your computer to a TV for more information.
5. Open a preinstalled DVD program, such as InterVideo WinDVD, by following these steps:
    1. Click **Start** on the taskbar, and point to **Programs**.
    2. Select a program, such as InterVideo WinDVD, to play the DVD. For instructions on how to use a program, see the help guide included with the DVD program within the same submenu.
6. Select a display.
    1. Press the **Fn+F7** keys to view the image on either the computer screen (LCD) or the TV.

    The Fn+F7 keys will not work once a DVD is inserted into the optical drive. Switching the display while a DVD is playing may cause the computer to malfunction, and you may need to restart the DVD software.
7. Insert the DVD into the optical drive.

Systems equipped with a CD-RW/DVD-ROM drive can read most DVD-R media.

Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may damage your hearing and the speakers. Reduce the volume before playing a DVD.

Do not switch power saving modes while the computer is playing a DVD.

Do not use memory-resident utility software to speed up disc access when playing a DVD. This may cause the computer to malfunction.

Disconnecting your computer from a TV

Simply unplug the audio-video (AV) cable from the A/V OUT jack on the computer.

Playing DVDs on your computer

Your computer is equipped with an optical drive that enables you to watch DVDs and most DVD-R discs on your computer.

To play a DVD while using AC power

1. Close all open programs.
2. Insert the DVD into the optical drive.
3. Open a preinstalled DVD program, such as InterVideo WinDVD, by following these steps:
    1. Click **Start** on the taskbar, and point to **Programs**.
    2. Select a program, such as InterVideo WinDVD, to play the DVD. For instructions on how to use a program, see the help guide included with the DVD program.

To play a DVD while using battery power

1. Set the power management profile to **DVD**.
    1. Close all open programs.
    2. Right-click the **CPU** icon or Profile icon , depending on the model you purchased, on the **Taskbar Notification** area.
    3. Select **Edit/Create Profiles** from the shortcut menu, and then select **DVD** from the submenu. You can also select **Automatic Profile Selection**, which sets the power management profile to **DVD** whenever a DVD is inserted into the optical drive. See Conserving Battery Power for more information.
2. Insert the DVD into the optical drive.
3. Open a preinstalled DVD program, such as InterVideo WinDVD, by following these steps:
    1. Click **Start** on the taskbar, and point to **Programs**.
    2. Select a program, such as InterVideo WinDVD, to play the DVD. For instructions on how to use a program, see the help guide included with the DVD program.

Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may damage your hearing and the speakers. Reduce the volume before playing a DVD.

Do not switch power saving modes while the computer is playing a DVD.

Do not use memory-resident utility software to speed up disc access when playing a DVD. This may cause the computer to malfunction.

Copying files to DVDs (on selected models only)

Use the table shown on Copying and Playing CDs and DVDs to see which type of DVD media your computer supports.

To copy files to a DVD-R or DVD-RW

1. Connect the AC adapter to the computer. See Connecting the AC adapter for more information.
2. Insert the disc into the optical drive. See Inserting and Ejecting CDs or DVDs for more information.
3. Click **Start**, **Programs**, and select the DVD software program you want to use from the submenu. For directions on how to use your DVD software programs, see the online help guides supplied with the programs.

Do not strike or shake the computer while copying files to a disc.

Using the Touch Pad

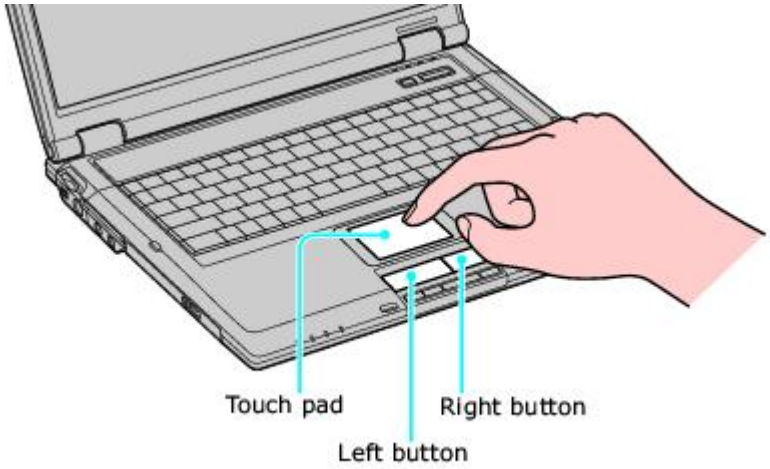
A pointing device called a touch pad is located in front of the keyboard. You can point to, select, drag, and scroll objects on the screen using the built-in touch pad.

Using the Touch Pad

A pointing device called a touch pad is located in front of the keyboard. You can point to, select, drag, and scroll objects on the screen using the built-in touch pad.

Describing the touch pad

Locating the Touch Pad



Touch Pad Action	Description
Sliding one finger	Equivalent to using a mouse to place the pointer on an item.
Tapping once	Equivalent to pressing the left button once.
Tapping twice	Equivalent to pressing the left button twice.
Sliding one finger while pressing the left button	Equivalent to using the mouse to drag an item.
Moving your finger along the right edge of the touch pad	Equivalent to scrolling vertically. (The scroll function is available only with programs that support a touch pad scroll feature.)
Moving your finger along the bottom to scroll horizontally	Equivalent to scrolling horizontally. (The scroll function is available only with programs that support a touch pad scroll feature.)

Using Memory Stick Media

Your VAIO® computer is equipped with a Memory Stick® slot that supports certain types of Memory Stick® media.

About Memory Stick media

Memory Stick® media are a compact, portable, and versatile data storage media designed for exchanging and sharing digital data with compatible devices. The following types of Memory Stick media are available, but compatibility with your computer can vary.

- MagicGate Memory Stick media (MG Memory Stick media) — Provides copyright protection with authentication and encryption, using Sony® MagicGate technology. Authentication ensures that protected content is only transferred between compliant devices and media. Protected content can be recorded and transferred in an encrypted format to prevent unauthorized duplication or playback. You can store different data formats on a single Memory Stick media.

- Memory Stick PRO media — Provides MagicGate copyright protection and high-speed transfer features when used with compatible Memory Stick PRO devices. VAIO® computers support Memory Stick PRO media for data storage purposes only. Currently, high-speed data transfer and the MagicGate technology features, such as authentication and encryption, are not available. You can store different data formats on a single Memory Stick media.

- Memory Stick media — Provides data storage only. The Memory Stick media does not provide MagicGate technology or high-speed data transfer. You can store different data formats on a single Memory Stick media.

Currently, Sony® SonicStage and OpenMG software are not compatible with the new Memory Stick PRO media. Sony suggests using only MG Memory Stick media to store and transfer any data created with SonicStage or OpenMG software.

Visit the Sony Computing Support Web site at http://www.sony.com/pcsupport regularly for the latest information on the new Memory Stick PRO media.

✍ Memory Stick media do not support video file playback directly from the media. Copy the video file to your hard disk drive and then play back the file.

Inserting Memory Stick media

Before using Memory Stick® media, back up important data. The media slot accommodates only one Memory Stick media at a time.

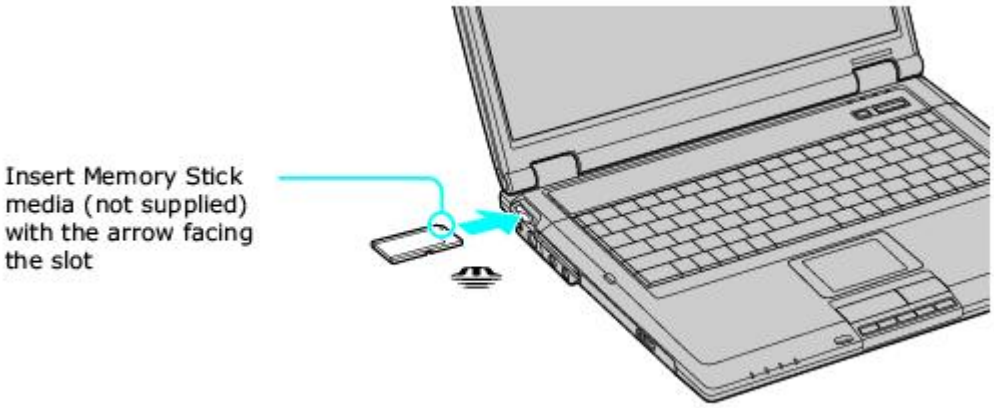
To insert Memory Stick media

1. Insert the Memory Stick media with the arrow facing up and toward the Memory Stick media slot.

   ✍ Inserting the media in the wrong direction may damage the connector pins.

2. Carefully slide the Memory Stick media into the slot until it clicks in place. The Memory Stick media indicator blinks briefly.

Inserting Memory Stick Media



Viewing the contents

Depending on the model you purchased, the Sony Memory Stick window may appear when you insert a Memory Stick® media. From this window, you can choose to view, print, copy or organize your Memory Stick images or data. If the Sony Memory Stick window does not appear when you insert your Memory Stick media, then follow these steps:

To view the contents

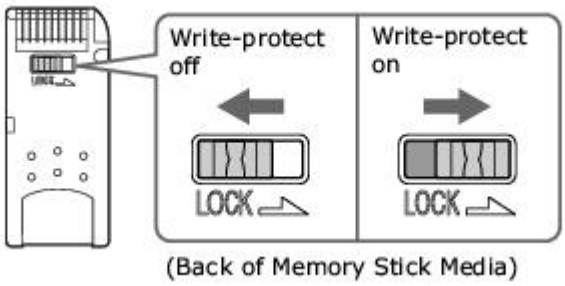
1. Click the **My Computer icon on the desktop**. The **My Computer** window appears.
2. Click **Removable Disk**. The **Removable Disk** window appears, displaying the contents stored on the Memory Stick media.

Write-protecting Memory Stick media

Memory Stick® media is designed with a write-protect tab to protect data from accidental erasure or overwriting. Move the tab to the right or left to set or release write-protection. When the write-protect tab of the Memory Stick media is set to LOCK, data cannot be recorded or erased.

Write-protect off	Data can be saved on the Memory Stick media.
Write-protect on	Data can be read from but not saved on the Memory Stick media.

Using the Write-Protect Tab



(Back of Memory Stick Media)

Formatting Memory Stick media

Memory Stick® media is formatted for immediate use when you purchase it. If you need to reformat Memory Stick media, use the Memory Stick Formatter that is provided with the media. For more information about using Memory Stick Formatter, refer to Formatter Help.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, confirm that the media does not contain files you want to keep. Back up important data before formatting the media.

To format Memory Stick media

1. Insert the Memory Stick media into the Memory Stick media slot. See To insert Memory Stick media for more information.
2. Click the **My Computer icon on the desktop**. The **My Computer** window appears.
3. Right-click **Removable Disk**, and select **Format** from the shortcut menu. The **Format** dialog box appears.
4. Click to select **Quick Format** in the **Format options** box, and then click **Start**.

Removing Memory Stick media

If the Memory Stick® media is removed prematurely, a blue screen with a message may appear prompting you to continue or exit. Reinsert the media into the slot and press **Enter** to continue. This enables the media to finish reading or writing data.

To remove Memory Stick media

1. Wait a minimum of 10 seconds after the Memory Stick media finishes reading or writing data before removing the media.
2. Make sure the access light is off.
3. Push the Memory Stick media in toward the computer.
4. When the Memory Stick media ejects, pull it out.

Using PC Cards

Your computer includes one or more PC Card slots. A PC Card enables you to connect devices such as an optical drive, floppy disk drive, or Network Interface Card (NIC).

See your VAIO® Computer Specifications for the type of PC Card that is compatible with your computer. These slots are compatible with CardBus. If your computer has more than one PC Card slot, use the lower slot for Type III PC Cards. You do not need to turn off your computer to insert or remove a PC Card.

Inserting PC Cards

To insert a PC Card

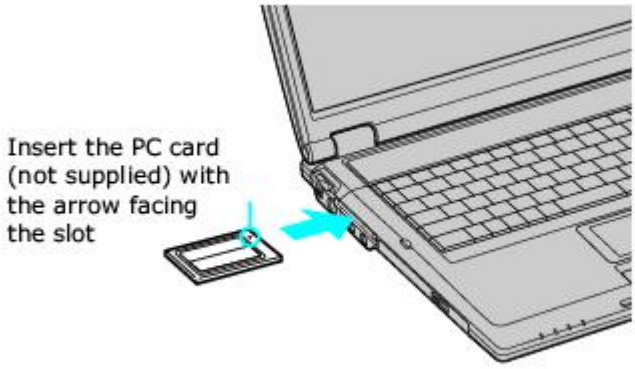
1. Make sure the front label of the PC Card is facing up.
2. Push the PC Card gently into the slot. The system automatically detects the PC Card.
3. If the Found New Hardware Wizard appears, follow the on-screen instructions to complete the installation process.

Do not force a PC Card into the slot; this may damage the connector pins.

When a PC Card is inserted, do not place your computer in a bag or case. Pressure or shock to a PC Card may damage your computer.

Touching the head of the PC Card will not damage the connector pins, but damage may occur if the head of the PC Card is sticking out of the PC Card slot while the computer is being transported.

Inserting a PC Card



Removing PC Cards

You can remove PC Cards while the computer is on or off. PC Cards draw power from the computer when they are inserted into the PC Card slot, whether or not you use the card.

If you are not using your PC Card and you are using a battery as a power source, remove the PC Card from the PC Card slot to conserve battery power.

To remove a PC Card while your computer is on

1. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** dialog box appears.
2. Click to select the PC Card in the **Hardware devices** window, if it is not already selected.
3. Click **Stop**. The **Stop a Hardware device** window appears.
4. Make sure the PC Card is selected, and click **OK**. A message appears stating it is safe to remove the hardware device.
5. Push the Release button. The Release button pops out.
6. Push the Release button a second time. The PC Card pops out.
7. Gently pull the card out of the slot.

To remove a PC Card while the computer is off

1. Push the Release button once. The Release button pops out.
2. Push the Release button a second time. The PC Card pops out.
3. Gently pull the card out of the slot.

Printer Connections

Your computer is compatible with many popular printers. However, to ensure the best performance, printers must be compatible with the Microsoft® Windows® operating system installed on your computer.

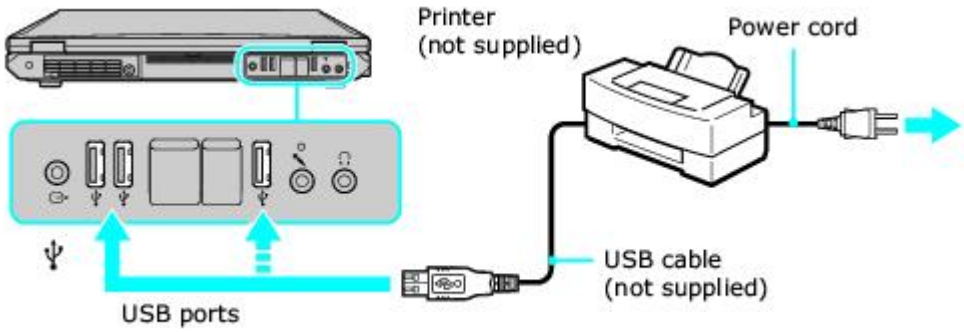
Connecting a USB Printer

You can connect a universal serial bus (USB) printer to your computer. The new hardware wizard enables you to easily install the printer software, but some printers require separate driver software installation. See the instructions that accompanied your printer for more information.

To connect a USB printer

1. Plug the USB cable into the USB port on your computer or port replicator, if applicable. See "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.
2. Plug the other end of the USB cable into the USB port on the printer. The **Found New Hardware Wizard** appears.
3. Follow the on-screen instructions.

Connecting a USB Printer



See the guide that accompanied the printer for more information on its installation and use.

Disconnecting a Printer

You can disconnect the printer cable when the computer is on or off. Disconnecting a printer when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect a printer

- Unplug the printer cable from the computer.

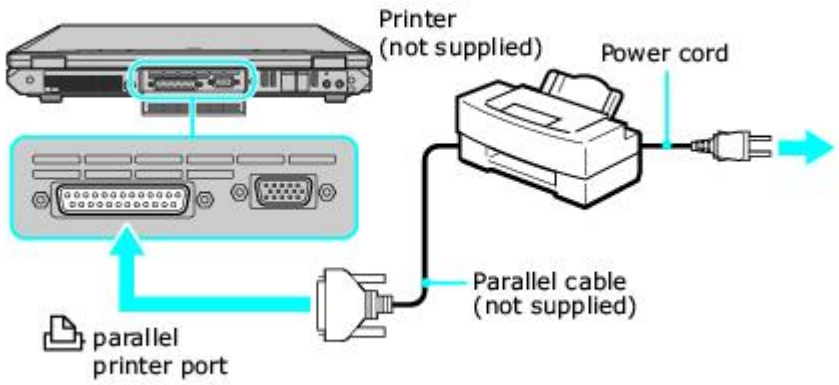
Connecting a Parallel Printer

You can connect a parallel port printer to your computer or port replicator, if applicable. The new hardware wizard enables you to easily install the printer software, but some printers require separate driver software installation. See the instructions that accompanied your printer for more information.

To connect a parallel port printer

1. Plug the printer cable into the Printer port on your computer or port replicator, if applicable. See "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.
2. Plug the other end of the printer cable into the port on the printer.
3. Restart your computer by clicking **Start**, **Shut Down**, and **Restart**. If the **New Hardware Wizard** appears, follow the on-screen instructions.
4. Make sure the computer recognizes the printer. Follow these steps:
   - Click **Start**, point to **Settings**, select Control Panel, and click **Printers**.
     If the computer recognizes the printer, it will be listed in the **Printers submenu** window.
     If the computer does not recognize the printer, you may need to install the printer driver software. See the guide that accompanied the printer for more information.

Connecting a Parallel Printer



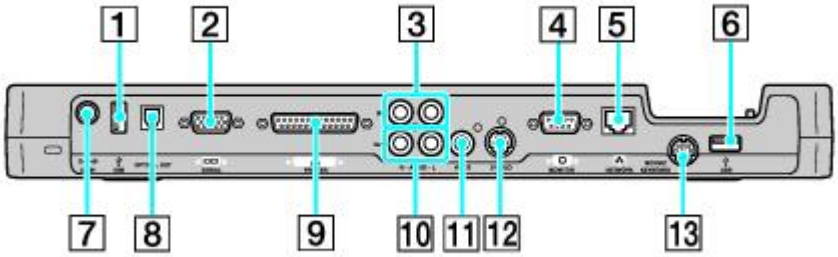
See the guide that accompanied the printer for more information on its installation and use.

Locating Ports and Jacks

A port replicator is a device that attaches to your notebook and contains additional jacks and ports, such as USB ports. A port replicator may come with your computer, depending on the model you purchased. If you wish to purchase a port replicator, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

The printer port on this port replicator is intended for printer connections only.

Port Replicator (Back Panel)



1 USB 2.0 port (high-/full-/low-speed)

2 Serial port

3 Audio In jacks

4 Monitor (VGA) port

5 Network (Ethernet) port (10BASE-T/100BASE-TX)

6 USB 2.0 port (high-/full-/low-speed)

7 DC IN port

8 Optical Out port

9 Printer port

10 Audio Out jacks

11 Video Out jack

12 S Video Out port

13 PS/2 port

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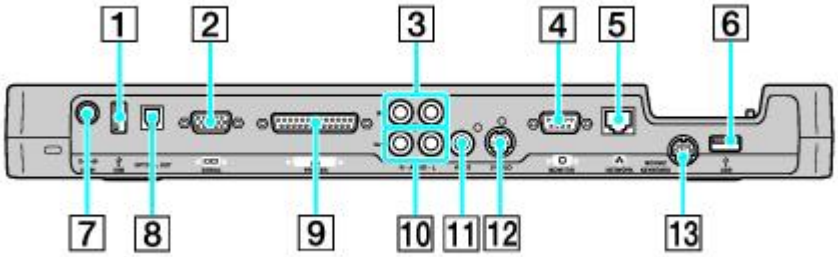

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7 DC IN port

8 Optical Out port

9 Printer port

10 Audio Out jacks

11 Video Out jack

12 S Video Out port

13 PS/2 port

Connecting a Port Replicator

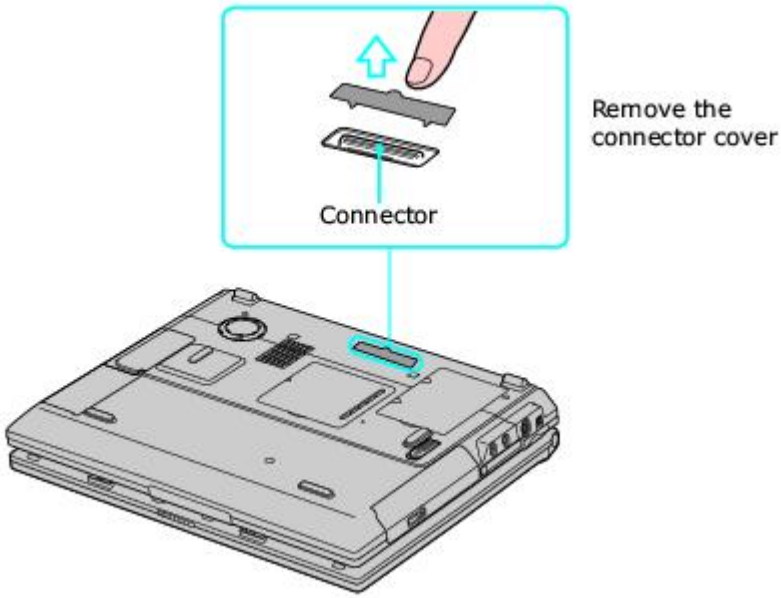
You can connect a port replicator to the computer while the computer is off. Use the AC adapter (not the battery) to power the computer while it is connected to a port replicator.

Moving the computer with the port replicator attached could disconnect the AC adapter or power cord, and may cause the computer to lose power or malfunction.

To connect a port replicator

1. Turn off the computer, and disconnect all attached devices.
2. On the bottom of the computer, lift and remove the port replicator connector cover so the port replicator connector is completely visible.

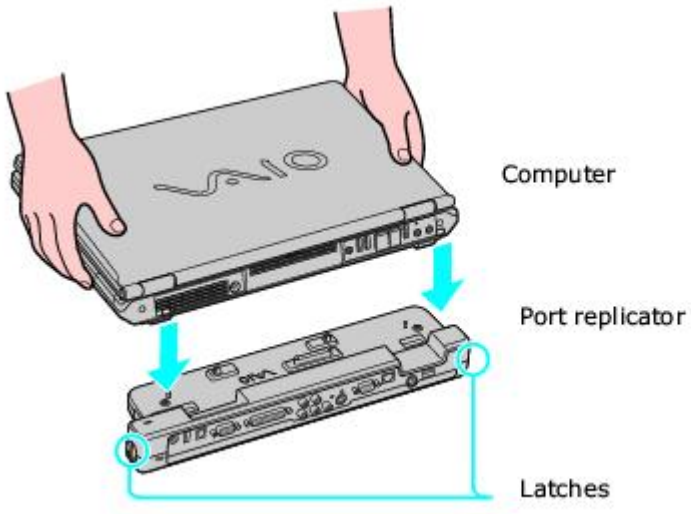
Removing the Port Replicator Connector Cover



You can charge the battery by installing it before you connect the port replicator. The battery automatically charges once you connect the AC adapter.

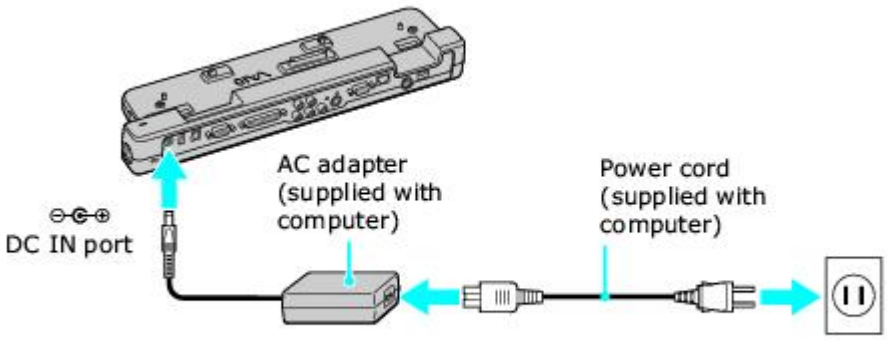
3. Align the connector on the bottom of the computer with the port replicator connector, and gently push the computer down until it clicks into place.

Connecting a Port Replicator

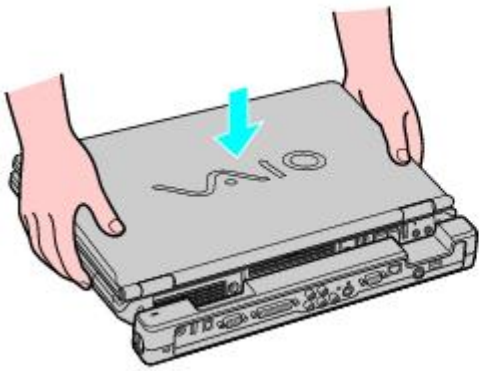


4. Plug the AC adapter into the **DC IN** port on the port replicator, and plug the power cord into the AC adapter and an AC outlet. The power indicator turns on.

Connecting an AC Adapter to a Port Replicator



Securing a Port Replicator



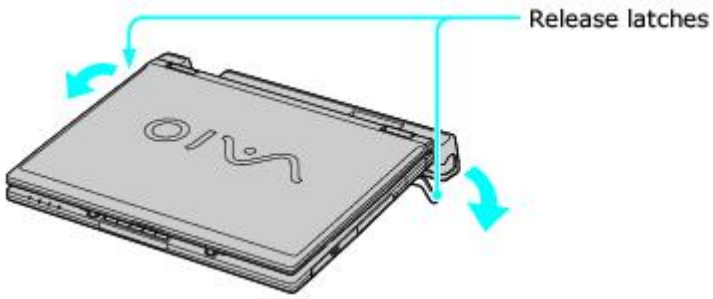
5. Make sure the port replicator is securely fastened to the computer.
6. Turn on the computer.

Disconnecting a Port Replicator

To disconnect a port replicator

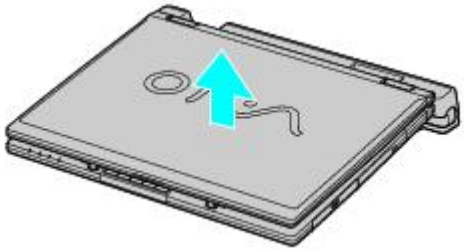
1. Close any active programs to prevent data loss.
2. Turn off the computer and disconnect the power cord.
3. Pull the release latches on each side of the port replicator to release the computer from the port replicator.

Releasing a Computer from a Port Replicator



4. Lift the computer away from the port replicator.

Disconnecting a Port Replicator



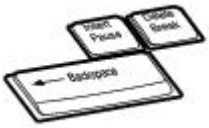
Using the Keyboard

Although your computer's keyboard is very similar to a typewriter's keyboard, you can use the additional keys on the computer's keyboard to perform specific computer-related tasks.

Using the Keyboard

Although your computer's keyboard is very similar to a typewriter's keyboard, you can use the additional keys on the computer's keyboard to perform specific computer-related tasks.

Keyboard descriptions

Key	Description
	The numeric keypad contains the keys found on a typical calculator. Use the numeric keypad to type numbers or perform mathematical calculations, such as addition and subtraction. Numbers appear on the front beveled edge of the numeric keys. Press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock indicator light turns on.) Press the Num Lock key again to deactivate the numeric keypad.
	The arrow keys move the pointer on the screen. They also function as the Home, End, Page Up, and Page Down keys, respectively, when the Fn key is pressed.
	The correction keys enable you to make corrections to keystrokes.
	The 12 function keys along the top of the keyboard perform designated tasks. For example, in many programs, F1 is the Help key. The task associated with each function key may vary from one program to the next.
	The Escape key cancels commands.
	The Print Screen key takes an electronic snapshot of the screen and moves it to the Clipboard. You can then paste the screen shot into a document and print it.
	The operator keys provide a variety of commands. For example, in many programs, instead of choosing the Save command from a menu, you can hold down **Ctrl** and press **S** (referred to as **Ctrl+S**). Also, the Shift key to produces capital letters or special symbols, such as @ and $.
	The Windows key opens the Start menu. It is the equivalent of clicking Start on the Windows® taskbar. See Windows key combinations for more information.
	The Fn key is used in combination with other keys to issue commands. See Fn key combinations for more information.
	The Applications key opens a shortcut menu of context-sensitive choices. It is the equivalent of clicking the right mouse button.

Windows key combinations

Key combination	Function
+F1	Displays the VAIO Help and Support Center window.
+Tab	Switches the selected button on the taskbar.
+D	Displays the desktop.
+E	Displays the My Computer window.
+F	Displays the Search Results window, where you can find a file or folder. This is the equivalent of selecting Search from the Start menu.
+Ctrl+F	Displays the Search Results - Computers window, where you can locate other computers. This is the equivalent of selecting Search, and then Computer from the Start menu.
+M	Minimizes all displayed windows.
Shift+ +M	Returns all minimized windows to their previous size.
+R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn+ +Insert	Displays the System Properties window. This is the equivalent of selecting Control Panel, and then System from the Start menu.

Indicator lights

Indicator	Function
Power	Turns on when the power to the computer is on, blinks in Standby mode, and turns off when the computer is in Hibernate mode or off.
Battery	Turns on when the computer is using battery power, blinks when the battery is running out of power, double-blinks when the battery is charging.
Memory Stick®	Turns on when data is read from or written to the Memory Stick media. (Do not enter Standby mode or turn off the computer when this indicator is on.) When the indicator is off, the Memory Stick media is not being used.
Hard Disk	Turns on when data is read from or written to the hard disk. Do not enter Standby mode or turn off the computer when this indicator is on.
Num Lock	Turns on when you press the Num Lock key on the keyboard to activate the numeric keypad. Press it a second time to deactivate the numeric keypad. The numeric keypad is not active when the indicator is off.
Caps Lock	Turns on when you press the Caps Lock key on the keyboard to type letters in uppercase. Letters appear in lowercase if you press Shift while the indicator is on. Press the key a second time to turn off the indicator. Normal typing resumes when the Caps Lock indicator is off.
Scroll Lock	Turns on when you press the Scroll Lock key on the keyboard to change how you scroll the display. Normal scrolling resumes when the Scroll Lock indicator is off. The Scroll Lock key functions differently depending on the program you are using and does not work with Programs.
Wireless LAN[1]	Turns on when the wireless LAN function is running.

[1] On selected models only.

Fn key combinations

Key combination **Function**

Fn+F3 Toggles the built-in speakers off and on.

Fn+F4 Adjusts the built-in speaker volume. An on-screen display appears notifying you when a change occurs.

To increase volume, press the **Fn**+**F4** keys and then press the ↑ or → key.

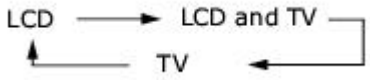
To decrease volume, press the **Fn**+**F4** keys and then press the ↓ or ← key.

Fn+F5 Adjusts the brightness of the computer screen (LCD).

To increase brightness, press the **Fn**+**F5** keys and then press the ↑ or → key.

To decrease brightness, press the **Fn**+**F5** keys and then press the ↓ or ← key.

Fn+F7 Toggles the display between the computer screen (LCD), a connected TV, and both the LCD and TV.



Select one display (LCD or TV) when playing a DVD. Connect the TV cable before you turn on the computer; otherwise, Fn+F7 will not work. You cannot use the Fn+F7 function to switch between LCD and TV once a DVD is inserted into the optical drive.

Fn+F12 Puts the system into Hibernate mode, a power management state. To return the system to normal operating mode, press the power button. Hibernate mode consumes the lowest level of power.
Fn+Esc Puts the system into Standby mode, a power management state. To return the system to the active state, press any key or the power button.

Connecting External Mice and Keyboards

Your computer is compatible with many popular mice and keyboards. To function properly, the device you connect must be compatible with the Microsoft® Windows® operating system installed on your computer.

Connecting a mouse or keyboard

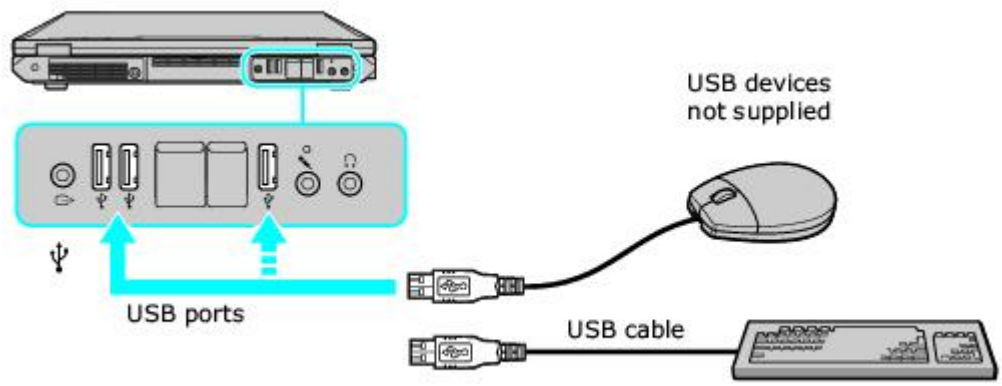
If you connect the mouse or keyboard when the computer is on, you may need to restart the computer for it to recognize the device.

To connect a USB mouse or keyboard to your computer

1. Plug the USB cable into the USB port . See "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start. (One USB port supports one USB connection.)
2. If the **New Hardware Wizard** appears, follow the on-screen instructions to complete the installation process.

Although the New Hardware Wizard guides you through the software installation, some devices require separate driver software installation. See the instructions that accompanied your mouse or keyboard for more information

Connecting a USB Mouse or Keyboard



To connect a PS/2 mouse or keyboard

1. Connect the port replicator to the computer.
2. Plug the PS/2 cable of the mouse or keyboard into the PS/2 port.

Disconnecting a mouse or keyboard

You can disconnect a USB or PS/2 mouse or keyboard when the computer is on or off. Disconnecting the mouse or keyboard when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect a mouse or keyboard

- Unplug the USB or PS/2 cable from the USB or PS/2 port.

Memory Upgrades

Before you upgrade your computer's memory, make sure you read the safety information in Precautions and Procedures. For the type of module and amount of memory installed on your computer, see the Welcome page to view the VAIO® Computer Specifications.

Precautions and Procedures

Sony recommends that memory upgrades be performed by an authorized Sony Service Center. To find the nearest center or agent, go to: http://www.sony.com/pcsupport.

The procedures described below assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment. When installing a memory module in your computer, make sure you read the proper safety precautions below. Mistakes that occur when installing or removing a memory module may cause a malfunction.

- Turn off the computer. Disconnect the computer from its power source and from any telecommunications links, networks, or modems before you install or remove a memory module. Failure to do so may result in personal injury or equipment damage.
- Introducing any liquids or any foreign substances or objects into the memory slots, or other internal components of the computer, will result in damage to the computer.
- Electrostatic discharge (ESD) can damage disk drives, memory modules, and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by momentarily touching an unpainted metal object that is grounded, such as a pipe, radiator, or faucet.
- Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- Use the special protective package to store a memory module and prevent ESD.
- Only use memory modules that are compatible with your computer. For the type of module and amount of memory installed on your computer, see the VAIO® Computer Specifications. If you wish to purchase a memory module, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

Removing and Installing Memory Modules

Make sure you read the safety information in Precautions and Procedures before you remove or install a memory module. When installing a memory module, do not open the module package until you are ready to install it. The package protects the module from Electrostatic discharge (ESD).

For memory upgrades and information about which memory modules to use, refer to your VAIO® Computer Specifications.

To remove a memory module

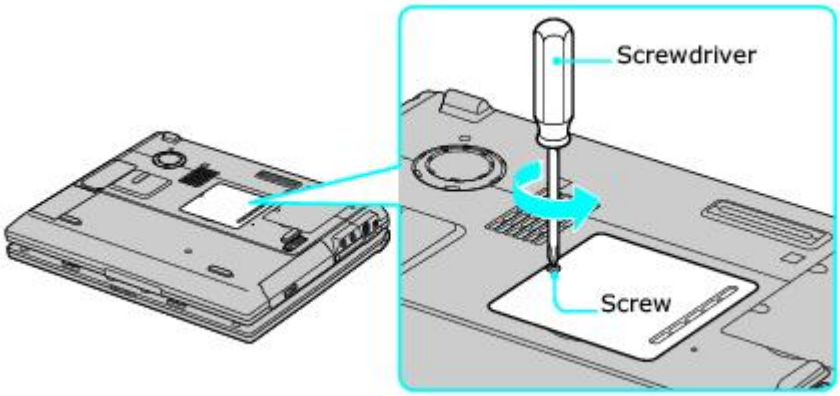
1. Turn off the computer and all attached devices.
2. Disconnect the power cord, all cables, and remove the battery if it is installed.
3. Wait for the computer to cool down.

   The interior of the computer becomes extremely hot during operation. Wait at least one hour for the computer to cool down before you remove the screws.

4. Turn the computer over and use an appropriate screwdriver to loosen and remove the screw(s) on the memory bay.

   To avoid damaging the computer, do not remove or loosen any other screws.

Removing the Bottom Screw(s)

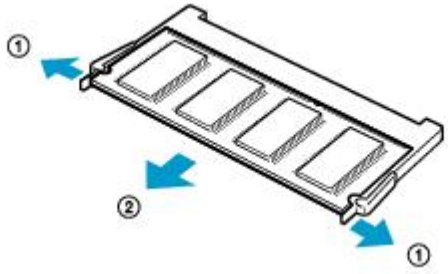


5. Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.

   Avoid touching any part of the motherboard or other components inside the computer.

6. Remove the memory module by pulling out the tabs (see arrows No. 1), and pulling out the module in the direction of arrow No. 2. See To install a memory module for more information.

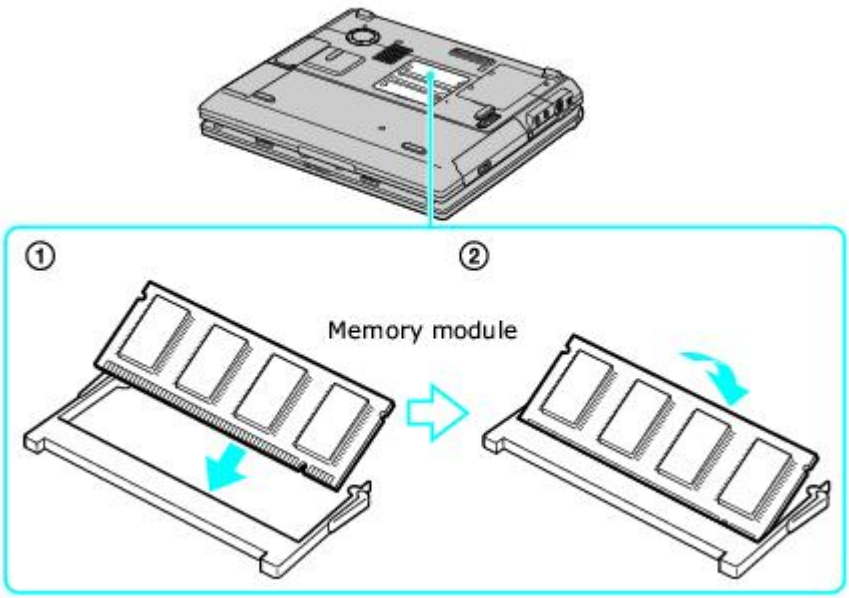
Removing a Memory Module



To install a memory module

1. Remove the new memory module from its packaging, and install the memory module by sliding it into the open slot at a 45-degree angle. See To remove a memory module.

Installing a New Memory Module



2. Push the module down until it snaps into place.
3. When the module is correctly seated, close the memory bay.
4. Replace the fastening screw(s) on the memory bay.
5. Make sure the system recognizes the new memory module. See Confirming Added Memory Capacity for more information.

Confirming Added Memory Capacity

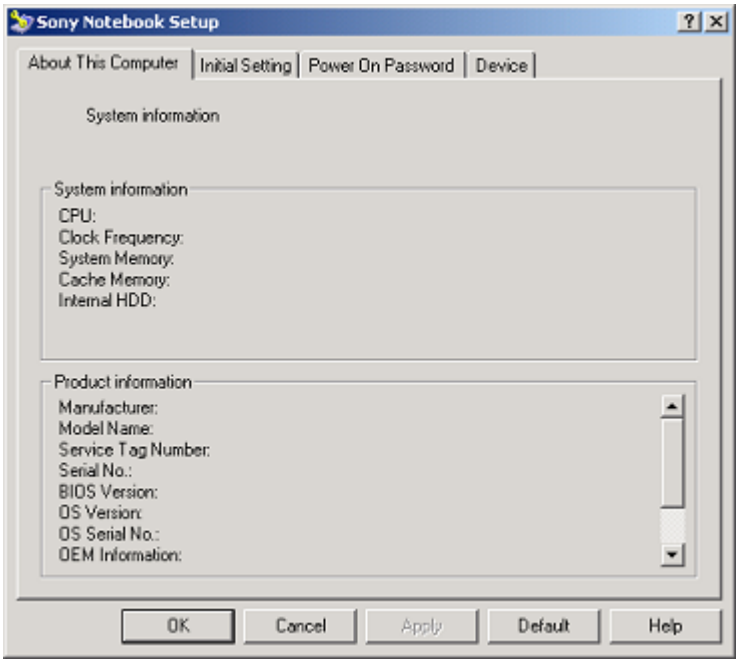
After you've installed a new memory module, make sure the operating system recognizes it.

To check your system's memory

1. Turn on the computer.
2. Click **Start** on the Windows® taskbar, point to **Programs**, and then point to **Sony Notebook Setup**.
3. Select **Sony Notebook Setup** from the submenu. The **Sony Notebook Setup** dialog box appears.
4. On the **About This Computer** tab, make sure the **System Memory** displayed in the **System Information** box matches the amount of memory installed.

The displayed memory size may be less than the installed memory due to the amount used by the display adapter.

Sony Notebook Setup



Using a Floppy Disk Drive

You can connect a floppy disk drive to your computer. The floppy disk drive enables you to read or write data to a floppy disk.

Using a Floppy Disk Drive

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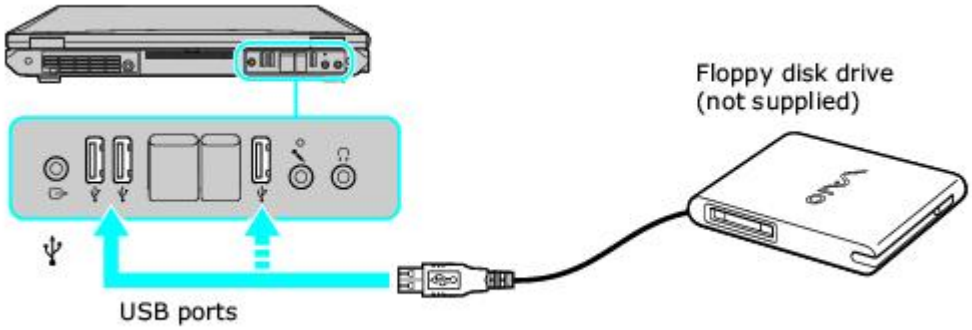
Connecting a floppy disk drive

You can connect a floppy disk drive when your computer is on or off. Connecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To connect a USB floppy disk drive

1. Close any active programs to prevent data loss.
2. Plug the USB cable (with the USB icon facing upward) into the USB port . The **Found New Hardware** pop-up message appears.

Connecting a Floppy Disk Drive



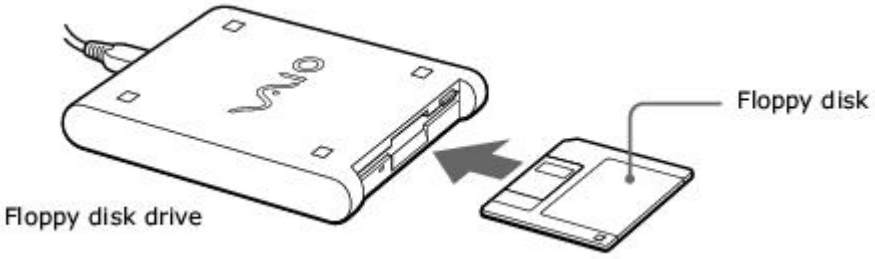
Inserting and removing floppy disks

To write data to a disk, use one that is not write-protected or disable the write-protect feature. The floppy disk drive cannot write data to a disk if it is inserted into the drive improperly.

To insert a floppy disk

1. Hold the floppy disk with the label facing up.
2. Push the floppy disk into the drive until it clicks into place.

Inserting a Floppy Disk



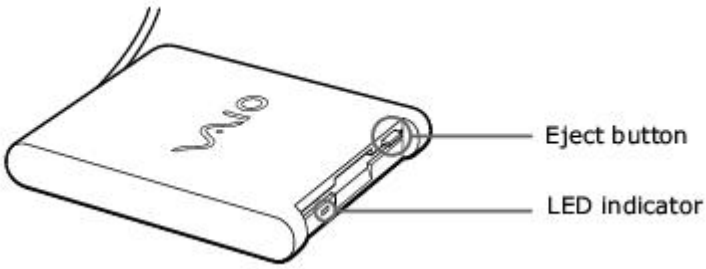
Do not open the shutter manually and touch the surface of the floppy disk.

To remove a floppy disk

1. Close Programs that access the floppy disk.
2. Wait for the LED indicator on the floppy disk drive to turn off.
3. Push the Eject button, and remove the disk.

To avoid losing data, do not push the Eject button when the LED indicator is on.

Removing a Floppy Disk



Protecting floppy disks

- Do not open the shutter manually or touch the surface of the floppy disk.
- Keep floppy disks away from magnets, direct sunlight, and heat sources.

Disconnecting a floppy disk drive

You can disconnect a USB floppy disk drive when the computer is on or off by simply disconnecting the USB cable from the computer. Disconnecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Storing a floppy disk drive

Fold the floppy disk drive cable and connector into the side compartment on the floppy disk drive.

Storing a Floppy Disk Drive

Using the Application Recovery and System Recovery CDs

(For Windows® 2000 models only) You can restore your system, individual programs, or drivers, using the Application Recovery and System Recovery CDs.

Application and System Recovery CDs

Your computer comes with the following Application Recovery and System Recovery CDs. You will need an optical drive to use these recovery CDs. If your computer does not come with an optical drive, use an external optical drive.

Application Recovery CDs
Sony Electronics Inc.

These CDs enable you to reinstall individual programs and device drivers if they become corrupted or are erased.

System Recovery CDs
Sony Electronics Inc.

These CDs enable you to restore the operating system and programs that shipped with your computer if they become corrupted or are erased. These CDs restore your computer to its original factory settings, so user data and programs installed since you started using your computer will be lost.

Using Your Recovery CDs

The following sections describe how to use the Application Recovery and System Recovery utilities.

Using the Application Recovery CDs

The Application Recovery CDs enable you to reinstall individual programs and device drivers, and to repair programs if they become corrupted or are erased. Reinstalling an individual program or device driver may correct a problem you are experiencing with your computer, peripheral hardware, or software. You may not need to reinstall the entire contents of your hard disk. To reinstall all the programs that shipped with your computer, use the System Recovery CDs. See Using the System Recovery CDs for more information.

Your computer must have a Microsoft® Windows® operating system to run the Application Recovery CD utility.

To reinstall programs with the Application Recovery CDs

Your system may include one or more Application Recovery CDs. If you have more than one Application Recovery CD, insert the first CD (CD No. 1) to run the Application Recovery program. You may be prompted to insert the next CD, depending on the application you wish to restore.

1. Turn on your computer. If your computer is already on, close all open programs.
2. Logon to the Microsoft® Windows® desktop.
3. Insert Sony Application Recovery CD No. 1 into your computer's optical drive. The Application Recovery utility starts automatically.
4. Click **OK** in the VAIO welcome window. The **Sony Application Recovery Program** window appears.
5. Double-click the **Software** folder. Icons representing the original, preinstalled programs are displayed.
6. Double-click the application you want to restore. The program's installation wizard begins.
7. Follow the on-screen instructions to complete the recovery process.

To reinstall device drivers using Windows XP operating system

(For Windows® XP systems only) The Microsoft® Windows® XP operating system is capable of reinstalling the original factory-installed device drivers, without using the Application Recovery CD(s).

1. Click **Start** in the Windows taskbar, then right-click **My Computer**. A shortcut menu appears.
2. Click **Properties**. The System Properties dialog box appears.
3. From the **Hardware** tab, click the **Device Manager** button.
4. Right-click to select the unknown device[1] or the device that requires the driver installation and click **Update Driver** from the shortcut menu. The Hardware Update Wizard appears.
5. Follow the on-screen instructions to locate and reinstall the appropriate device driver.

   If Windows® XP does not reinstall the device driver(s), follow the steps in the next section to reinstall the device driver(s) using the Application Recovery CD(s).

To reinstall device drivers with the Application Recovery CDs

Your system includes one or more Application Recovery CDs. Insert Application Recovery CD No. 1 to start the application or driver recovery process. You are prompted to insert the next CD(s), depending on the application or driver you want to restore.

1. Logon to the Microsoft® Windows® desktop.
2. Insert Application Recovery CD No. 1 into your computer's optical drive. The VAIO welcome window appears. Click **OK**, then click **Quit** to close the Sony Application Recovery utility. (Leave the CD in the optical drive.)
3. Click **Start** on the Windows® taskbar, and right-click **My Computer**. A shortcut menu appears.
4. Click **Properties**. The **System Properties** dialog box appears.
5. Click the **Hardware** tab, and click **Device Manager**.

6. Right-click the unknown device[2] or the device that requires the driver installation, and click **Update Driver** from the shortcut menu. The Hardware Update Wizard appears.

7. In the **Hardware Update Wizard**, click to select **Install from a list or specific location (Advanced)**.

8. Click **Next**.

9. Click to cancel the **Search removable media (floppy, CD-ROM...)** option.

10. Click to select the **Include this location in the search** check box.

11. Click **Browse**. The **Browse For Folder** dialog box appears.

12. Navigate to the optical drive, and click to select the Application Recovery CD. The CD contents are displayed.

13. Click the folder name of the device in which you want to reinstall, and click **OK**. The **Hardware Update Wizard** appears.

14. Click **Next**, and select the device folder. The Microsoft® Windows® operating system automatically reinstalls the device driver(s) from the Application Recovery CD.

15. Click **Finish**, and remove the Application Recovery CD from the optical drive.

16. Turn off your computer by clicking **Start**, and then **Turn off computer**.

17. Wait 30 seconds, and turn on your computer.

If you have any questions about using the Application Recovery CD(s), visit http://www.sony.com/pcsupport.

[1] Unknown devices are identified by a yellow question mark. A device that has a driver problem is identified by a yellow exclamation mark.

[2] Unknown devices are identified by a yellow question mark. A device that has a driver problem is identified by a yellow exclamation mark.

Using the System Recovery CDs

The System Recovery CDs enable you to format your hard disk drive and restore the operating system and all original, preinstalled programs. If the operating system or programs become corrupted or are erased, you can restore your computer to the original factory settings.

The System Recovery process removes all programs that you may have installed since you started using your computer. Reinstall any program that was not included with the computer when you purchased it.

You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or program may correct the problem. Use the Application Recovery CDs to reinstall individual programs and device drivers. See Using the Application Recovery CDs for more information.

The System Recovery CDs contain a backup copy of all the programs originally installed on your hard disk. It can be used only to recover the hard disk of the Sony computer you purchased.

When you successfully complete your system recovery, you are prompted to complete the Windows® registration process.

System Recovery options

- **Default System Drive Recovery** — All data on Drive C is deleted. The factory default settings and programs are restored on this drive only.
- **Change Partition Size and Recover** — All partitions, custom installations, and changes are removed from the hard drive. You can set the partition sizes for both Drive C and Drive D. The original, preinstalled operating system and programs are restored.
- **Factory Default Settings Recovery** — All data and partitions are removed from the hard drive. All original factory settings, the operating system, and preinstalled programs are restored.

The System Recovery utility does not back up your system's data. If you wish to retain your system data, perform a backup to an external media.

To use the System Recovery CDs

Your system may take a few minutes to load necessary files. A blue screen may appear during the downloading process.

Your system may include one or more System Recovery CDs. If you have more than one System Recovery CD, insert the first CD (CD No. 1) to run the System Recovery program. You will be prompted to insert the next CD(s) once the information from the first CD has been installed.

1. Press the disc eject button to open the optical disc drive and extend the disc tray.
2. Insert the Sony System Recovery CD No. 1 into the optical drive, and close the drive. The first CD must be in the drive before you restart your computer.
3. (Windows XP) Turn off your computer by clicking **Start**, **Turn off computer**, and selecting **Turn Off**.
   (Windows 2000) Turn off your computer by clicking **Start**, **Shut Down**, and selecting **Shut Down**.
4. Wait at least 30 seconds, and turn on your computer. The System Recovery utility restarts from the optical drive. Your screen displays the downloading progress, "Starting VAIO Recovery Utility."
5. When the **VAIO System Recovery Utility** wizard appears, click **Next**.
6. The Notes on Use window appears. Click **Next**.
7. On the Main Menu - Product Recovery window, select the appropriate option to recover your system.
8. Follow the on-screen instructions to complete the recovery process.

The recovery process takes approximately 30 to 60 minutes to complete.

After recovering your system using the System Recovery CD(s), you may be prompted to insert your Application Recovery CD(s) after restarting Windows. Use the Application Recovery CD(s) to complete full restoration of your system.

If your computer does not start from the Recovery CD

1. Press the power button and hold it for more than four seconds to turn off the computer.
2. Turn on the computer. When the Sony logo is displayed, press the **F2** key. The **BIOS Setup Utility** appears.
3. Press the right arrow key → to select the **Exit** menu.
4. Press the down arrow key ↓ to select **Get Default Values**, and press **Enter**. The **Setup Confirmation** window appears.
5. Press **Enter** again to select **Yes**.
6. Make sure **Exit (Save Changes)** is selected, and then press **Enter**. The **Setup Confirmation** window appears again.
7. Make sure **Yes** is selected, and press **Enter**. The computer restarts from the Recovery CD.

✍ If you have more than one System Recovery CD, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes 30 to 60 minutes to complete.

After recovering your system using the System Recovery CDs, you may be prompted to insert your Application Recovery CDs after restarting the Windows operating system. Insert the Application Recovery CD to automatically complete recovery of your system.

Computer

What do I do if my computer won't start?

- Make sure the computer is securely plugged into a power source and turned on. Make sure the power indicator shows the power is on.
- Make sure the battery is inserted properly and charged.
- Make sure the floppy disk drive (if applicable) is empty.
- If the computer is plugged into a power strip or uninterruptible power supply (UPS), make sure the power strip or UPS is turned on and working.
- If you are using an external display, make sure it is plugged into a power source and turned on. Make sure the brightness and contrast controls are adjusted correctly. See the guide that came with your display for details.
- Disconnect the AC adapter and remove the battery. Wait one minute. Reattach the AC adapter and reinsert the battery. Turn on the power.
- Condensation may cause the computer to malfunction. If this occurs, do not use the computer for at least one hour.
- If the computer still does not turn on, follow these steps:

    1. Unplug the power cord and remove the battery.
    2. Use a thin, straight object (such as a paper clip) to press the reset button.
    3. Reinsert the power cord and the battery.
    4. Turn on the computer.

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    2. Use a thin, straight object (such as a paper clip) to press the reset button.
    3. Reinsert the power cord and the battery.
    4. Turn on the computer.

What do I do if a BIOS error appears when my computer starts?

If the message "Press <F1> to resume, <F2> to setup" appears at the bottom of the screen, follow these steps:

1. Press the **F2 key**. The **BIOS Setup** menu appears.
2. Set the date (month/day/year). Press **Enter**.
3. Press the **Down Arrow** key to select **System Time**, and then set the time (hour: minute: second). Press **Enter**.
4. Press the **Right Arrow** key to select the **Exit** tab, and then press the **Down Arrow** key to select **Get Default Values**. The message **Load default values for all SETUP items** appears.
5. Press **Enter**. The **Setup Confirmation** window appears.
6. Select **Yes**, and press **Enter**.
7. Select **Exit (Save Changes)**, and press **Enter**. The **Setup Confirmation** window appears again.
8. Select **Yes**, and press **Enter**. The computer restarts.

If this occurs on a regular basis, contact Sony Computing Support (http://www.sony.com/pcsupport).

What do I do if the message "Operating system not found" appears when my computer starts, and why won't Windows start?

- Make sure the computer does not have a "non-bootable" floppy disk in the floppy disk drive (if applicable).
- If a non-bootable floppy disk is in the drive:
  1. Remove the floppy disk.
  2. Restart the computer and confirm that the Microsoft® Windows® operating system starts properly.
- If Windows still does not start, follow these steps to initialize the BIOS:
  1. If there is a disk in the floppy disk drive, then remove it.
  2. Turn off the computer.
  3. Remove any peripheral devices connected to the computer.
  4. Restart the computer.
  5. Press the **F2 key** when the Sony logo appears. The **BIOS Setup** window appears.
  6. Press the **Right Arrow** key → to select the **Exit** menu.
  7. Press the **Down Arrow** key ↓ to select **Get Default Values**. The message **Load default values for all SETUP items** appears.
  8. Press **Enter**. The **Setup Confirmation** window appears.
  9. Select **Yes**, and press **Enter**.
  10. Select **Exit (Save Changes)**, and press **Enter**. The **Setup Confirmation** window appears again.
  11. Select **Yes**, and press **Enter**. The computer restarts.

Why does my computer stop responding? Why can't I turn off my computer?

It is best to turn off your computer using the Turn Off Computer option on the Microsoft® Windows® Start menu, located on the taskbar. Using other methods, including those listed below, may result in loss of unsaved data.

- Click **Start** on the Windows® taskbar, select **Shut Down**, select Shut Down again, and then click **OK**.
- If your computer does not turn off, press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Security** dialog box appears, click **Shut Down** from the **Shut Down** menu.
- If your computer still does not turn off, press and hold the power button or slide and hold the power switch until the computer turns off.
- If your computer stops responding while playing a CD or DVD, press the **Ctrl**+**Alt**+**Delete** keys simultaneously. You can turn off the computer from the **Windows Security dialog box**.

  Pressing the **Ctrl**+**Alt**+**Delete** keys simultaneously or turning off the computer with the power button or switch may cause loss of data.

- Remove the AC adapter and battery.

Why won't my computer enter Standby or Hibernate mode?

Your computer may become unstable if the operating mode is changed before the computer completely enters Standby or Hibernate.

To restore the computer to normal operating stability:

1. Close all open programs.
2. Restart the computer. Follow these steps:
    1. Press the **Windows** key .
    2. Press **U**.
    3. Press **R** to select restart.
    4. Press Enter.
3. If the computer does not restart, follow these steps:
    1. Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. The **Windows Security** window appears.
    2. Press the **Right Arrow** key to select Shut Down.
    3. Press **Enter**.
    4. Press **R** to select restart.
    5. Press Enter.
4. If this procedure does not work, press and hold the power button or slide and hold the power switch until the computer turns off.

Why does the System Properties dialog box display a slower CPU speed than the maximum?

This is normal. Because your computer's CPU utilizes a type of CPU speed controlling technology for power conservation purposes, System Properties may display the CPU's current speed instead of the maximum speed.

Why don't my changes appear on the computer screen (LCD)?

You may need to refresh the computer screen. Press and hold the **Windows** key , and press **D** twice.

How do I know when the battery is charged?

To determine the remaining battery charge, see Locating battery information.

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When is the computer using AC power?

When the computer is directly connected to the AC adapter, it uses AC power, even if a battery is installed.

When should I recharge the battery?

- When the battery level falls below 10 percent.
- When both the battery and power indicators blink.
- When you have not used the battery for a long time.

When should I replace the battery?

If the battery power is still low after charging it, the battery may be reaching the end of its life and should be replaced.

Should I be concerned that the installed battery is warm?

No, it is normal for the battery to be warm when it is powering the computer.

Can my computer enter Hibernate mode while using battery power?

Your computer can enter Hibernate mode while using battery power, but some software programs and peripheral devices prevent the system from entering Hibernate mode. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently. See To activate Hibernate mode for information on how you can manually activate Hibernate mode.

Why doesn't my modem work?

- Make sure the telephone cable is securely plugged into the Modem jack on the computer and the wall jack.
- Make sure the telephone cable is working. Plug the cable into an ordinary telephone and listen for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)

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- Make sure the telephone cable is working. Plug the cable into an ordinary telephone and listen for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)

Why is my modem connection slow?

Your computer is equipped with a V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment, such as fax machines or other modems. If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), follow these steps:

- Ask your telephone company to verify your telephone line is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone line, try connecting the modem to that line.

Why can't my computer connect to a wireless LAN access point?

- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.
- Make sure the Wireless LAN switch on the computer on.
- Make sure power to the access point is on.
- Make sure the access point is displayed in the Available networks window.
- Make sure the encryption key is correct.

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- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.
- Make sure the Wireless LAN switch on the computer on.
- Make sure power to the access point is on.
- Make sure the access point is displayed in the Available networks window.
- Make sure the encryption key is correct.

Why can't I access the Internet?

- Check the access point settings. Refer to the instructions supplied with the access point.
- Make sure your computer and the access point are connected to one another.
- Move your computer away from obstructions or closer to any access point you may be using.
- Make sure your computer is properly configured for Internet access.

Why is the data transfer speed slow?

- The wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize the data transfer speed, move your computer away from obstructions or closer to any access point you may be using.

- If you are using a wireless LAN access point, the device may be temporarily overloaded depending on how many other devices are communicating via the access point.

- If your access point interferes with other access points, change the access point channel. See your access point instructions for more information.

Why is the communication speed interrupted or slowed down when MPEG2 data is transferred?

The typical effective data transfer speed via an access point is 4-5 Mbps when adhering to the IEEE 802.11b standard. High-rate stream transfers with MPEG2 data may lower this rate.

How do I avoid data transfer interruptions?

- When your computer is connected to an access point, data transfer interruptions may occur when using large files or if the computer is in close proximity to microwaves and cordless telephones.
- Move the computer closer to the access point.
- Make sure the access point connection is intact. For more information, see Network Connections.
- Change the access point channel. See your access point instructions for more information.

Can I connect to an IEEE 802.11a device?

Computers with built-in wireless LAN support the IEEE 802.11b standard only. Devices connecting to a wireless LAN using the IEEE 802.11a standard cannot connect to devices using the IEEE 802.11b standard.

What are channels?

Wireless LAN communication occurs on divided frequency bands known as channels. Third-party wireless LAN access point channels may be preset to different channels from Sony devices.

If you are using a wireless LAN access point, refer to connectivity information contained in your access point instructions.

Microphone

Why doesn't my microphone work?

If you are using an external microphone, make sure the microphone is turned on and is properly plugged into the Microphone jack on the computer.

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Mouse

What do I do if the computer doesn't recognize the mouse?

- Make sure the mouse is securely plugged into the port.
- Restart the computer with the mouse connected to the computer.

Mouse

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- Make sure the mouse is securely plugged into the port.
- Restart the computer with the mouse connected to the computer.

What do I do if the pointer doesn't move when I use the mouse?

- Make sure another mouse is not installed.
- If you are playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you still cannot use the pointer, restart the computer. You can restart the computer three different ways:
  - Press the **Windows** key , and press **U**. When the **Shut Down** window appears, press **R, and then press Enter**.
  - Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Security** window appears, press the **Right Arrow** key to select **Shut Down**. Press **Enter**, then press **R**, and press Enter.
  - Press and hold the power button. When the computer turns off, press the power button again to restart the computer.

Speakers

Why won't my speakers work?

- Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
- Your speakers may not be designed for computer use.
- If the speakers have a mute button, set the button to off.
- If the speakers have a volume control, make sure the volume is turned up loud enough to hear sound.
- If you have connected an audio cable to the Headphones jack, disconnect the cable and use the speaker cable that was supplied with the speakers.
- If you are using battery power, make sure the battery(s) is inserted properly and is charged.
- If the speakers require external power, make sure the speakers are connected to a power source. See the guide that accompanied the speakers for more information.

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- If the speakers require external power, make sure the speakers are connected to a power source. See the guide that accompanied the speakers for more information.

Why can't I hear sound from my speakers?

- If the computer is using battery power, make sure the battery is properly inserted and is charged.
- If you are using a program that has its own volume control, make sure the volume control is properly set. See that program's help guide for more information.
- Your speakers may be set to mute, the volume setting may be too low, or the audio option may be disabled. See Adjusting the volume and Enabling the audio feature for more information.

Why don't the Fn+F3 or the Fn+F4 key combinations work?

The Fn+F3 keys toggle the built-in speakers on and off. The Fn+F4 keys adjust the built-in speaker volume. The computer may not recognize the Fn+F3 and Fn+F4 keys if the correct speakers are not selected. Follow these steps:

1. Right-click the **Volume** icon on the taskbar, and select **Adjust Audio Properties**. The Sounds and Multimedia Properties dialog box opens.

2. On the **Audio** tab, click **Advanced** in the **Speaker settings** box. The **Advanced Audio Properties** window appears.

3. On the **Speakers** tab, select the correct speaker setup from the **Speaker setup** drop-down menu.

Why do I hear noise distortion while listening to music with speakers or headphones?

You may experience noise distortion while listening to music with speakers or headphones if the CPU control is set to Automatic Profile Selection. If your computer is using battery power, use the preinstalled PowerPanel program to set the CPU control to Maximum Performance. Follow these steps:

- Right-click the **CPU** icon or the Profile icon[1] , point to **Profiles**, and select **Maximum Performance**.

[1] Profile icon available on selected models only.

What do I do if the touch pad does not work?

- Try restarting your computer. Follow these steps:
  1. Press the **Windows** key .
  2. Press **U**. The **Shut Down Windows** dialog box opens.
  3. Press **R** to restart the computer, and press Enter.
- If the computer does not restart,
  1. Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. The **Windows Security** dialog box appears.
  2. Press the **Right Arrow** key to select **Shut Down**.
  3. Press **Enter**.
  4. Press **R** and then Enter to restart the computer.
- If you still cannot restart your computer, press and hold the power button to turn off the computer.
- If the pointer does not move while playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you are still experiencing problems, make sure another mouse is not installed.

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- Try restarting your computer. Follow these steps:

  1. Press the **Windows** key .
  2. Press **U**. The **Shut Down Windows** dialog box opens.
  3. Press **R** to restart the computer, and press Enter.

- If the computer does not restart,

  1. Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. The **Windows Security** dialog box appears.
  2. Press the **Right Arrow** key to select **Shut Down**.
  3. Press **Enter**.
  4. Press **R** and then Enter to restart the computer.

- If you still cannot restart your computer, press and hold the power button to turn off the computer.
- If the pointer does not move while playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you are still experiencing problems, make sure another mouse is not installed.

How do I maintain CDs and DVDs?

- Avoid touching the surface of the disc with your fingers. Fingerprints and dust on the surface of the disc may cause reading errors.
- Try using canned compressed air to clean dusty discs.
- Do not clean the disc with solvents (such as benzine, thinner, alcohol, commercially available cleaners, or anti-static spray), which may damage the disc. To clean the disc, follow these steps:

    1. Hold the edge of the disc, and use a soft cloth to wipe the surface from the center out.
    2. If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out.
    3. Wipe off any remaining moisture with a dry, soft cloth.

- Do not drop or bend the disc.

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- Do not drop or bend the disc.

Why does my computer freeze when I try to read a disc?

- The disc your computer is trying to read may be dirty or damaged. Follow these steps:

  1. Restart the computer by clicking **Start**, **Shut Down**, and **Restart**.
  2. Eject the disc from the optical drive.
  3. Examine the disc for dirt or damage. If the disc is dirty, see How do I maintain CDs and DVDs? for instructions on how to clean it.

What do I do if the drive tray won't open?

- Make sure the computer is on.
- Press the Eject button on the optical drive.
- If the Eject button does not work, click **My Computer** on the Windows® desktop. Right click the optical drive icon, and select **Eject** from the shortcut menu.
- If none of the above options work, insert a thin, straight object (such as a paper clip) in the manual eject hole near the Eject button.

What do I do if the optical drive isn't playing my CD or DVD properly?

- Make sure the disc was inserted into the drive with the label facing up.
- Make sure the necessary program(s) is installed according to the manufacturer's instructions.
- If the CD or DVD is dirty or damaged, the computer will stop responding. Follow these steps:

    1. Restart the computer by pressing the **Ctrl+Alt+Delete** keys, and selecting **Restart** from the **Shut Down** menu of the **Windows Task Manager** dialog box.
    2. Remove the CD or DVD from the optical drive.
    3. Check the disc for dirt or damage. If you need to clean the disc, see How do I maintain CDs and DVDs? for instructions.

- If you are playing a CD or DVD and cannot hear sound, follow these steps:

    1. Double-click the **Volume** icon on the **Taskbar Notification** area, and click to cancel the **Volume Control** and **Wave Mute** check boxes.
    2. Check the volume setting in the audio mixer.
    3. If you are using external speakers, check the volume settings on the speakers and the connections between the speakers and the computer.
    4. Make sure the CD audio feature is enabled and the correct driver software is installed. Follow these steps:

        1. Click **Start** on the Windows® taskbar, point to Settings, click **Control Panel**, and **System**. The **System Properties** window appears.
        2. Select the **Hardware** tab, and click **Device Manager** in the **Device Manager** box. A window with a listing of the computer's hardware devices appears.

            ✍ If an "X" or an exclamation point appear on the listed device, you may need to enable the device or reinstall the drivers.

        3. Double-click the optical drive icon to open the submenu.
        4. Double-click the listed drive name, and select the **Properties** tab.
        5. Click to select the **Enable digital CD audio for this CD-ROM device** check box, if it is not selected.

            ✍ You can confirm the driver software by selecting the **Driver** tab, and clicking **Driver Details**.

        6. Click **OK** to close the window.

- Make sure an adhesive label was not attached to the CD or DVD. Adhesive labels can come off while the disc is in the optical drive and damage the drive or cause it to malfunction.
- If a region code warning appears, the disc may be incompatible with the optical drive. Check the DVD package to make sure the region code is compatible with the optical drive.
- If you notice condensation on the computer, do not use the computer for at least one hour. Condensation can cause the computer to malfunction.

Why did the computer screen (LCD) go blank?

- Your computer screen may go blank if the computer has lost power or has entered a power saving mode (Standby or Hibernate). If the computer is in LCD (Video) Standby mode, press any key to activate the computer screen. See Using power saving modes for more information.

- Make sure the computer is plugged into a power source and is on. The power indicator on the computer will be on if the computer is on.

- If your computer is using battery power, make sure the battery is inserted properly and is charged. See Using the Battery for more information.

- If the display mode is set to external display, use the **Fn+F7** key combination. See Selecting a display for more information.

Why can't I view the entire DVD video display on a TV screen?

The display resolution may not be properly set. To adjust the display resolution, see Selecting a display for more information. It is recommended that you adjust the display resolution to 1024 x 768 or smaller, depending on the size of the external display screen.

How do I adjust the image on the TV screen?

Use the controls on your external display to adjust the image. See the help guide that accompanied your display for more information.

How do I change the video resolution on the TV screen?

The video may not appear on the entire TV screen if your computer resolution is set larger than 1024 x 768. Adjust the video resolution to 1024 x 768 or smaller.

✍ If you are using the A/V Out jack, plug the audio-video (AV) cable into the computer before you start the computer.

To change the video resolution, follow these instructions:

1. Right-click the desktop, and select **Properties** from the shortcut menu. The **Display Properties** dialog box appears.
2. Select the **Settings** tab.
3. Move the screen resolution slider to the left to reduce the size and to the right to increase the size of the video resolution.

How do I switch the computer screen (LCD) from LCD to TV?

Press the **Fn+F7** keys to view the image on either the computer screen (LCD) or the TV. See Selecting a display for more information.

The Fn+F7 key combination will not work once a DVD is inserted into the optical drive. Switching the display while a DVD is playing may cause the computer to malfunction, and you may need to restart the DVD software.

Why can't I open my image files?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, back up important data and confirm that the media does not contain files you want to keep.

1. Copy the data from the Memory Stick media onto your computer's hard disk to save data or images.
2. Format the Memory Stick media using Memory Stick Formatter software preinstalled on your computer. For instructions about formatting a Memory Stick media, see Formatting Memory Stick media.

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Why can't I save music files onto my Memory Stick media?

- Only MagicGate Memory Stick media can be used with copyright protected data, such as music.
- Copyright protected music cannot be checked out to any Memory Stick media other than MG Memory Stick media.
- Using recorded music requires permission of the copyright holders.
- Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital video camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible video camera recorders.

How do I prevent damage to the Memory Stick media?

- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the media connector with your finger or metallic objects.
- Do not attach labels other than the supplied label to a media.
- Do not bend, drop, or apply strong shock to the media.
- Do not disassemble or modify the media.
- Do not allow the media to get wet.

How do I extend the life of the Memory Stick media?

- Use the supplied storage case. See the instructions that came with your media for more information on its use.
- Do not use or store the media in a location that is subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or places with corrosive substances

Why doesn't my PC Card work?

- Make sure the PC Card is inserted properly. See Inserting PC Cards for more information.
- Make sure the PC Card is compatible with the Microsoft® Windows® operating system installed on your computer.
- See the instructions that accompanied your PC Card. You may need to install driver software if you are not using a Sony PC Card.

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Why doesn't my computer recognize attached devices?

For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate modes while the card is inserted into the PC Card slot, the computer may not recognize the PC Card or the connected device. Restart your computer.

Why can't I insert my PC Card?

- Make sure you are inserting the card correctly. See Inserting PC Cards for more information.
- You may not be able to use some PC Cards or some functions of the PC Card with this computer. Check the guide that accompanied your PC Card for more information on its use.

Why does an exclamation mark (!) appear on the Device Manager tab in the System Properties dialog box?

- The exclamation mark indicates there is a problem with the specified device. Make sure all cable and power connections are secure.
- You may not be using the most recent driver software provided by the PC Card manufacturer. Make sure the necessary drivers are installed. You may need to remove the driver software, and reinstall it.

Why can't I print a document?

- Make sure the printer is on, and the printer cable is securely connected to the ports on your printer and computer.
- Make sure the printer is compatible with the Microsoft® Windows® operating system installed on your computer.
- You may need to install the printer driver software before you use the printer. See the guide that accompanied the printer for more information.
- If the printer is not functioning after the computer resumes from a power saving mode (Standby or Hibernate), then restart the computer.
- If the bidirectional communication functions are provided with your printer, disabling the functions on your computer may enable printing. Follow these steps:

1. Click **Start**, and point to **Settings**.
2. Click **Printers**.
3. Right-click an unused printer and select **Properties**.
4. Click the **Ports** tab.
5. Click to cancel the **Enable bidirectional support** check box.
6. Click **OK**.

This change to the settings disables the bidirectional communication functions of your printer, such as data transfer, status monitoring, and remote panel.

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Why doesn't the Unplug or Eject Hardware icon appear on the taskbar when the drive is connected?

The computer does not recognize the floppy disk drive. First, make sure the USB cable is properly connected to the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close any programs that were accessing the floppy disk drive.
2. Wait for the LED indicator on the floppy disk drive to turn off.
3. Push the Eject button, and remove the disk.
4. Reconnect the floppy disk drive by inserting the USB connector (with the USB icon facing upward) into the USB port .
5. Restart the computer by clicking **Start** on the Windows® taskbar, **Shut Down**, and then **Restart**.

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4. Reconnect the floppy disk drive by inserting the USB connector (with the USB icon facing upward) into the USB port .
5. Restart the computer by clicking **Start** on the Windows® taskbar, **Shut Down**, and then **Restart**.

Why is the drive unable to write data to a floppy disk?

Make sure the floppy disk is properly inserted in the drive. See Using a Floppy Disk Drive for instructions on how to insert the disk properly.

If the disk is inserted properly and you are still unable to write data to it, the disk may be full or write-protected. You can either use a floppy disk that is not write-protected, or disable the disk's write-protect feature by moving the write-protect tab into the "close" position.